# THE POLITICS OF GENETICALLY MODIFIED FOOD AID:

# ZAMBIA AND MALAWI IN 2002

by

Marin Nicole Bryce

A dissertation submitted to the faculty of
The University of Utah
in partial fulfillment of the requirements for the degree of

Doctor of Philosophy

Department of Political Science

The University of Utah

May 2018

# The University of Utah Graduate School

## STATEMENT OF DISSERTATION APPROVAL

The dissertation of **Marin Nicole Bryce**

has been approved by the following supervisory committee members:

| | | |
|---|---|---|
| **Howard Lehman** | , Chair | **1-10-18** Date Approved |
| **Peregrine Shwartz-Shea** | , Member | **1-10-18** Date Approved |
| **Tabitha Benney** | , Member | **1-10-18** Date Approved |
| **Kathryn Grace** | , Member | **1-10-18** Date Approved |
| **Tobias Hofmann** | , Member | **1-10-18** Date Approved |

and by **Mark Button** , Chair/Dean of the Department/College/School of **Political Science**

and by David B. Kieda, Dean of The Graduate School.

## ABSTRACT

Faced with drought and the prospect of widespread starvation, in August of 2002 the government of Zambia made the decision that they would no longer accept the food aid the United States was offering because it contained grains that were genetically modified. The Zambian government's decision was based on several factors, among them that genetically modified food was unhealthy, harmful, and even potentially poisonous for humans, and that allowing genetically modified food aid into the country could lead to cross-contamination of crops, which they believed would make any produce they chose to export unacceptable to the European Union. At the same time, Malawi looked at similar factors and made the opposite decision, that they would allow genetically modified food aid on the condition that it be milled into flour before entering the country. Using Robert Putnam's framework of two-level game theory, this dissertation explores and explains the factors that contributed to the two different decisions. I hypothesize that there were three essential factors: first, pressure from the U.S., the WFP, and other international institutions caused quite different reactions in Zambia and Malawi. Second, domestic civil society played a role by acting as a voice for the people, though their message was at times mixed. Third, other domestic considerations such as concerns about effects on people's health, the damage to the countries' ecosystem, and public opinion all played a role.

## TABLE OF CONTENTS

## LIST OF ACRONYMS

| | |
|---|---|
| CISANET | Civil Society Agricultural Network |
| FAO | Food and Agriculture Organization |
| EU | European Union |
| GM | Genetically Modified |
| GMO | Genetically Modified Organism |
| MMD | Movement for Multiparty Democracy |
| SCCI | Seed control certification Institute |
| SGR | Strategic Grain Reserve |
| UPND | United Party for National Development |
| U.S. | United States |
| USAID | United States Agency for International Development |
| WFP | World Food Program |
| WHO | World Health Organization |

# CHAPTER 1

# INTRODUCTION

## 1.1 Introduction

Faced with drought and the prospect of widespread starvation, in August of 2002, the government of Zambia made the decision that they would no longer accept the food aid the United States was offering because it contained some grains that were genetically modified. The Zambian government's decision was based on several factors, among them that genetically modified food was unhealthy, harmful, and even potentially poisonous for humans, and that allowing genetically modified food aid into the country could lead to cross-contamination of crops, which they believed would make any produce they chose to export unacceptable to the European Union (EU). At the same time, Malawi looked at similar factors and made the opposite decision, that they would allow genetically modified food aid on the condition that it be milled into flour before entering the country. This dissertation most closely covers the months before and after the decisions in August and September of 2002, but in order to fully understand the situations beforehand, it also stretches back into the 1990s and forward several years into the later 2000s. This dissertation will explain and examine the factors that went into that decision, and why two countries, faced with the same

dilemma, chose such very different paths.

The purpose of this chapter is to provide an overview of the entire dissertation. To this end, the objectives of the project, along with the research question, are given in the first section. The next section explains the significance of this project and why it is important to the field of International Relations. The next sections very briefly address the theory being used and the methodology for the project, with more in-depth discussions of both in further chapters. It is important to understand the background and position of each country being studied, and the next sections focus on increasing understanding. In the last section, the layout of the rest of the dissertation is given.

## 1.2 Study Objectives and Research Question

The objectives of this study are threefold:

1. To understand how the different decisions were made in 2002 as to whether to accept genetically modified food aid from the U.S.
2. To understand how domestic and international pressures interacted to move each country toward their decision.
3. To understand how competing interests fed the politics of the situation.

The research question for this dissertation is: What were the forces and pressures at play in Zambia and Malawi in 2002 that caused them to make different decisions regarding the acceptance of genetically modified food aid?

## 1.3 Significance of the Project

Foreign aid is a subject that has been written about extensively in the field of Political Science. Food aid has also been written about in the literature, but is not as thoroughly covered as other areas in Political Science. Genetically modified technology, the opposing attitudes of the U.S. and EU, and the ramifications of both are also studied. Even the subject of genetically modified food aid has been researched and written about, as well as the 2002 decision in Zambia and Malawi. However, on the whole these scholars (see Attwell 2013; Bowman 2015; Broadbent 2012; Clapp 2005; Clapp 2012; Cooke and Downie 2010; Fig 2003; Mwale 2006; Zerbe 2004, all discussed in Chapter 2), have not adequately applied theory to the subject, instead choosing to emphasize different aspects or detailing the story. Certainly none of them has applied game theory to the subject. That is what makes this dissertation both unique and valuable. I seek to detail the story, but also to apply game theory to the subject in order to gain more insight into the why the situation played out as it did.

This project presents the explanation of the 2002 situation as a game theoretical model being played on two-levels and looking at the players in the game, their positions, and their influence. Applying two-level game theory to these decisions will provide a more complete picture of the factors that went into Zambia and Malawi's decisions and will contribute to a richer understanding of how two-level game theory can be used in studying the developing world.

In addition, I made a conscious effort to partially tell this story through the eyes of people who experienced it and either helped make the decision or tried to

influence it. Their insights and perspectives make this dissertation a valuable addition to the literature on the subject of genetically modified food aid.

This dissertation also brings together more thoroughly the debate over genetically modified technology and the situation in Zambia and Malawi. While there were many factors that went into the decision, the debate between the U.S. and EU over the acceptability of GMOs and the perception of consequences played a role and needs to be explored. This dissertation adds to the conversation about genetically modified technology and how it has affected and is affecting the developing world. It also adds to the conversation about pressures the developing world experiences because of their place on the world stage.

This project is also significant because it illuminates a situation in which millions of people's lives depended on the decision of their government, a decision in which those ordinary people had no say. It is a story of the pressures that exist for and in states, especially in developing states in times of crisis. It is important to study how these countries react in times of crisis and the factors that go into the decisions. Doing so helps us understand how countries may react in the future.

## 1.4 Theory

Because two-level game theory is the theoretical framework being used in this dissertation, this section will look at how the theory works, how it will be applied to the case studies, and then discuss how scholars have used it.

Much of game theory contains the same basic components. First, as in any game, there are players. These players can be states or people, depending on who is making the decisions, and game theory assumes that the players are rational (Snidal 1985, 38). In the case of this dissertation, the major players in the game include the governments of Zambia, Malawi, and the U.S., specifically the United States Agency for International Development (hereafter USAID).[1] This game also involved levels, in this case an international level, Level I, composed of USAID, the World Food Program (WFP) and other institutions, and a domestic level, Level II, composed of the Zambian and Malawian people as represented by civil society and the pressures they put on the government, and other internal considerations such as the potential for people to starve from lack of food and the damage bringing in the genetically modified food aid could do to the ecosystem of the countries. This dissertation is about the interaction between the two game levels and how they affected each other in the different stages of negotiations and discussions between the international and the state, and the state and domestic.

Another element of game theory is that of cooperation or defection. Cooperation and defection can be difficult to define clearly in some games, but essentially, if a player acts as they said they would act, they have cooperated. If they do not, the player has defected (Axelrod 1984, 12). For the cases in this dissertation, past experiences between the international community and Zambia

[1] The European Union (EU) also had a part to play, and will be discussed further in Chapter 6, but suffice it to say, it was the perception by Zambia and Malawi of what the EU might think and might do that was a consideration, rather than the EU itself.

and Malawi would seem to indicate that cooperation involved continuing to accede to the U.S. by accepting what the U.S. offered, in this case the genetically modified food aid. Defection therefore would involve not accepting the food aid because this indicates a change in the relationship. Cooperation by the U.S. would have involved agreeing to remove the genetically modified food from the shipments being sent. Defection was not doing so. However, using the framework of two-level games allows for a more nuanced look at the choices and actions of states than just cooperation or defection. Indeed, Sebenius (1992, 364) argues that cooperation or defection is not always relevant to games and presents a false dichotomy when thinking about states. Jervis (1988, 329) also does not believe that all games must include the cooperation/defection dichotomy and instead presents the idea of a continuum rather than a stark choice between cooperation and defection. This is useful when cooperation and defection are not always clear cut, as in the cases of Zambia and Malawi. The concepts of cooperation and defection changed with the bargaining between levels, and thus it is impossible to say that there was one idea of cooperation or defection that remained stable throughout the process.

There is one aspect of cooperation that is relevant in the cases of Zambia and Malawi. One of the goals among nations is cooperation and many scholars (see Oye 1985, Axelrod 1984, Jervis 1988, and Axelrod and Keohane 1985) ask how cooperation can emerge. Axelrod (1984, 12) concludes that cooperation is only possible because players will meet again; cooperation can emerge because there is an unknown endpoint—the players will meet again and again in an

infinite number of games. With no known endpoint, players are more sensitive to how their present actions will affect the way others act in the future. They are more likely to cooperate because fostering cooperation among states will provide better results for all. This is true in the cases of Zambia and Malawi with both the U.S. and the EU. They had to carefully play the round of games on both levels because there were future consequences for playing poorly.

This leads to another component commonly used in game theory--iterations. An iteration is another round of the game to be played at some point, whether immediately or in the future. Iterations are important because a player who does not believe they will ever face their opponent again has more incentive to defect rather than cooperate, whereas knowing another iteration is likely encourages cooperation. In this case, Zambia and Malawi had to carefully consider how their decision would affect their relationship not only with the U.S., but also how it would affect trade with the EU in the next iteration of the game.

Leading from iterations is another concept common to game theory, the shadow of the future. The shadow of the future is an extension of iterations, and is the belief that players must take into account how their present actions will affect how future games, or iterations, are played. In these cases, I hypothesize that the shadow of the future should have been important for Zambia and Malawi because of the ramifications of not accepting the food aid from the U.S. In making their decisions, the countries needed to decide how much they feared the U.S. retaliating with reduced aid (for example) in the future, should they fail to go along with U.S. wishes. On the other hand, they also needed to weigh how

important it was to their EU exports that their crops not be contaminated with genetically modified organisms. Each country had to consider how to balance the needs of their people with the possible ramifications of their decisions.

The final component of game theory relevant to this dissertation is win-sets. A win-set is the set of circumstances that will allow players to cooperate rather than defect in any given situation. Win-sets expand or contract in relation to the number of stakeholders, the situation, and other elements. Each player has a given win-set and part of the game is to ensure that those win-sets overlap with part of the opponent's win-set. In the case of the 2002 crisis, the win-set for the U.S. included both countries accepting the food with no reservations. The win-set for Zambia and Malawi included the U.S. removing the GMO food aid. In these cases, no country got what it wanted.

Sometimes players on Level I attempt to influence what is happening on Level II by attempting to change the win-set in order to assure the game goes their way. These attempts vary in effectiveness because the players on Level I may not be fully aware of the situation on Level II. Level I players' attempts at change may thus result in what Putnam calls "reverberation" (Putnam 1988, 454). Reverberation is a critical component in the game being described in this dissertation because it helps account for the differences in outcome between the two countries. For both countries, the pressure to accept or reject the genetically modified food from Level I was intense. This pressure was Level I's attempt to cause reverberations in Zambia and Malawi and change the game. Those attempts, along with several other factors, worked in Malawi. In Zambia, they

backfired.

This theory is used to explore the domestic and international pressures associated with the decision about genetically modified food aid, and how the interaction of the two-levels affected the decisions made. In the cases of Zambia and Malawi, I have hypothesized that these international pressures played a role in the domestic considerations. Indeed, in these cases the international repercussions could be seen as a constituent, in that the fear of international response had to be treated as something that could have an effect in the country in the future. In each case, predicting the reactions of each state to accepting or rejecting the food aid was an unknown but important factor to consider.

The concept of interconnectedness is essential to seeing the full story, thus the need to look at both levels of the game being played. Domestic concerns without any mention of international pressures cannot complete the story. At the same time, only looking at international pressures overstates their importance in the decision. Each one depends on the other and must be viewed together.

Two-level game theory has greater explanatory power because it takes into account that there is more than just the domestic level to consider when making decisions. Use of this theory increases the complexity of the explanation, providing a more thorough exploration.

The research question will be answered using two-level game theory, or the theory that a state's actions cannot be understood unless one considers two-levels of play: the domestic and the international. This dissertation employs the

theory of two-level games most famously propagated by Robert Putnam. The first level is the international system and how the state interacts with the system, whether with other individual states, groups of states, or with international organizations. The second level is the domestic system, including government, the citizenry, and civil society. Both levels must be taken into account. On the international level, statesmen, including elected politicians, ambassadors, or other appointed negotiators, who are negotiating are attempting to satisfy the domestic groups while avoiding negative consequences and seeking advantages from foreign powers or the international community. At the domestic level, pressure is brought to bear on elected politicians and bureaucrats by players like interest groups and civil society. Government workers attempt to form coalitions of strength from these domestic level groups that will allow them to carry forward their agenda. Neither level of the game can be safely ignored (Putnam 1988, 34). The process can be seen in Figure 1.

In order to explain these games, Putnam looks at a hypothetical situation. In stage one of the process there is bargaining between the state and international negotiators, leading to a cautious agreement. This is Level I in Putnam's model. In stage two, there are discussions between the state and groups of constituents to decide whether to accept the agreement completed in stage one. This is Level II in Putnam's model. Any revision of the agreement arising from discussions in Level II requires a renegotiation at Level I (Putnam 1988, 436-7). This back and forth discussion results in multiple stages at the two different levels of the negotiating process.

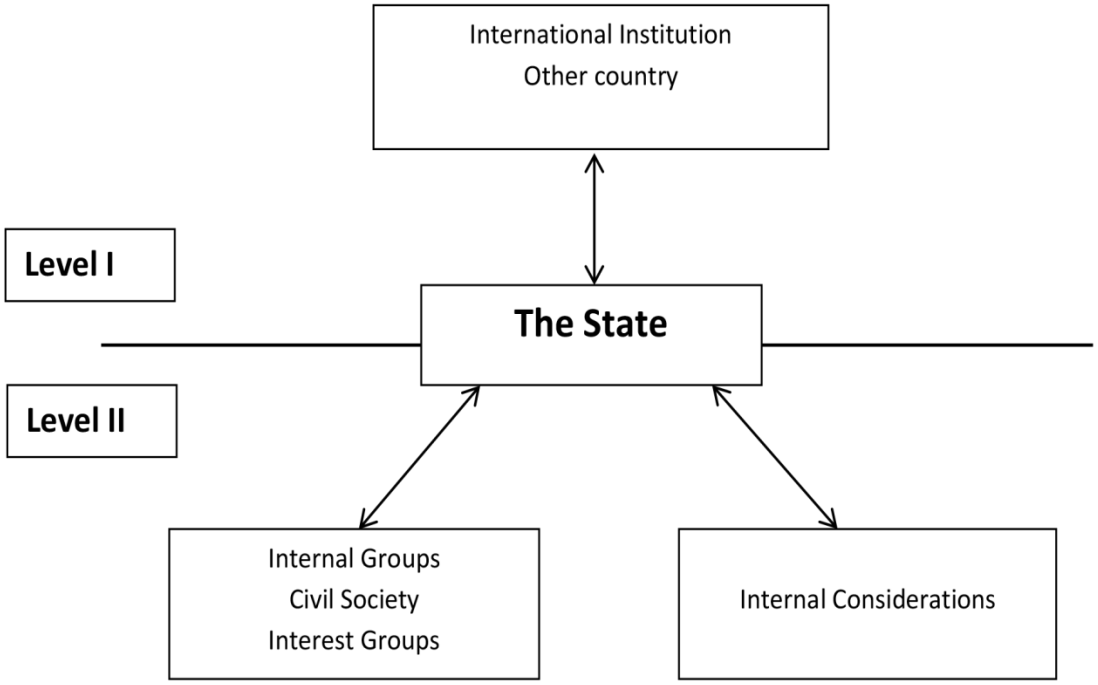


Figure 1 Putnam's Model

In relation to this dissertation, ultimately, both Zambia and Malawi were responding to pressures on both levels, and trying to satisfy both levels, but were in slightly different positions and chose to put the emphasis on different decision-making criteria. Putnam's Level I corresponds to both the discussions that happened in regard to the international community, as well as the discussions that then happened with the U.S. and the WFP in order to make the decision. Level I will be discussed further in Chapter 4. The discussions that happened within Zambia and Malawi when the famine began are on Level II. There were conversations happening within government, amongst the people, in the scientific community, and in civil society. Level II will be discussed further in Chapters 5 and 6.

## 1.5 Hypotheses

I hypothesize that there were three primary factors, two-level II domestic and one Level I international, that played a role in the acceptance or rejection of genetically modified food aid in Zambia and Malawi. These three factors were weighted differently between Zambia and Malawi, and resulted in the different decisions being made.

The Level I international factor is international pressure. The U.S. and EU are diametrically opposed in their acceptance of genetically modified food, with the U.S. regulating but accepting it, and the EU being completely opposed to it. Each entity had an interest in whether the food was allowed into these countries. The U.S. might gain another market for their food, genetically modified or

otherwise, while the EU would have to reconsider accepting exported food from a country that had accepted genetically modified food. Relations with the U.S. and the EU were very important to Zambia and Malawi. In addition to being a large donor of aid, the U.S. provides important investment in both countries. The EU is the fourth largest importer for Zambian goods and resources. For Malawi, the EU is the second largest trading partner. Maintaining good relationships with the EU is critical for both countries. Zambia and Malawi both export food and animals to the European Union, in similar amounts. In 2015, Zambia exported 64 million Euros of food to the EU, or 14.2% of everything they export there. Malawi exported 70 million Euros' worth of food to the EU, or 31.4% of the total exports to the EU (European Commission 2014).

The first Level II domestic factor was pressure from the civil society in each country, including nonprofit organizations (both native and non-native), churches, scientists, universities, and other nongovernmental entities that were dealing with the situation on the ground. Some of these entities were close to the situation and watching people go hungry, and thus had a different perspective, while others were studying the situation closely and offering their advice. Scientists in particular were in a difficult spot because the science on genetically modified food was not (and still is not) conclusive. This meant the decision had to be made based on incomplete information.

The second domestic factor is internal considerations. There were several considerations that had to be made. The first was whether rejecting the genetically modified food aid would mean people starved to death. If the country

did accept the food aid, they had to consider whether it would make the people sick. The third consideration was political pressure from opposition political parties within the country. Another consideration was the possible damage to the country's ecosystem if people planted the genetically modified seeds. And finally, Malawi had one more consideration: it was in a worse position than Zambia economically, agriculturally, and with respect to international donors. All of these had to be taken into account before making the decision.

The pressures on the countries were not quite the same. As will be seen in Chapters 4 through 6, Malawi was in a much worse financial position and had a worse relationship with international donors when the crisis began. In Zambia, pressure from the international community coupled with already-existing suspicions of the U.S. made them reluctant to accept the food.

Stages are a critical component of Putnam's two-level games because they help define and separate the actions of each player. Figure 2 shows the game as a whole. Table 1 shows the stages of the game, including a stage that happened before the negotiations between the countries and international institutions started.

## 1.6 Brief Methodological Discussion

This dissertation is studying two decision-making processes, how they happened and why. Because the dissertation seeks to pull reasons and factors from the story, the best methodology to be used is qualitative. Qualitative methodology allows for reasons to be pulled from narratives of those involved,

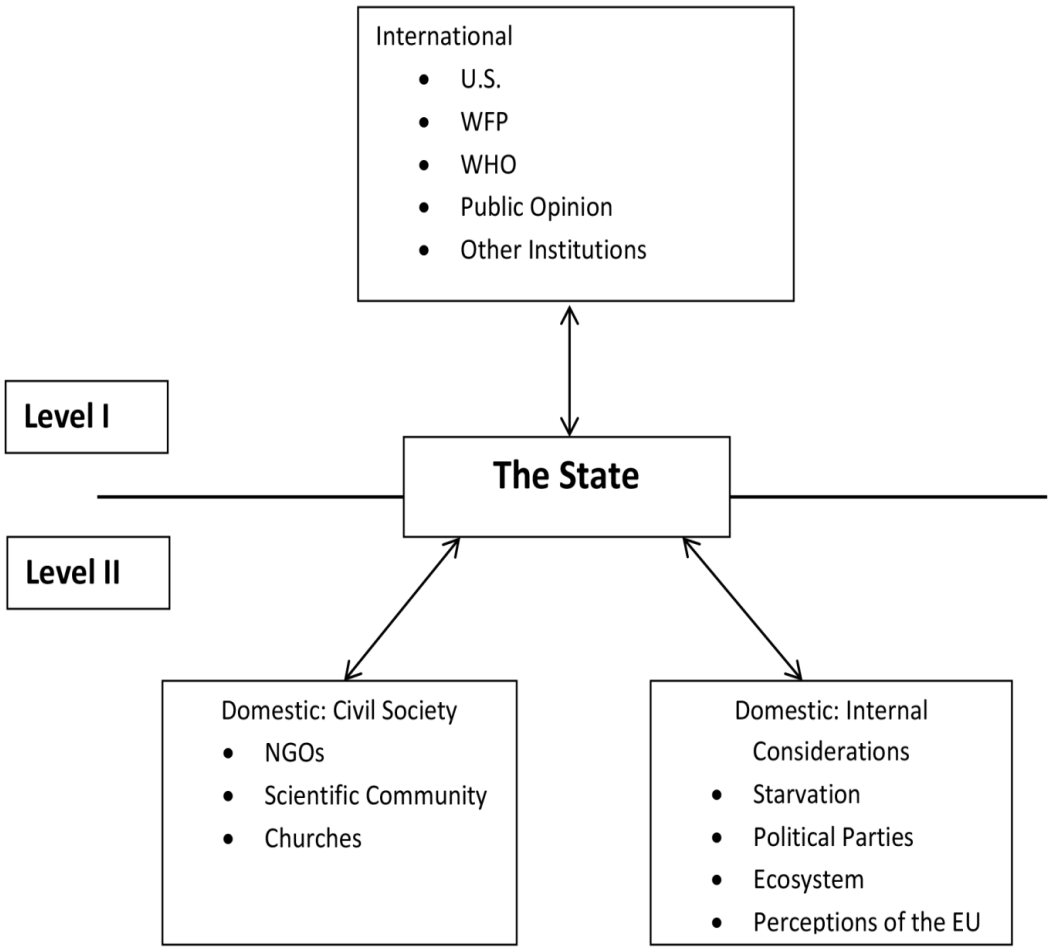


Figure 2 Pressures Involved in Decision Making

Table 1 Stages of the Games

| **Timeline** | **Zambia** | **Malawi** | **Stages** |
|---|---|---|---|
| Early Spring 2002 | WFP and FAO conduct famine risk assessment for Zambia and Malawi | WFP and FAO conduct famine risk assessment for Zambia and Malawi | Pre-Game |
| Spring 2002 | WFP issues request for food aid, U.S. responds with offer of food, including GM grain | WFP issues request for food aid, U.S. responds with offer of food, including GM grain | Stage 1 |
| Summer 2002 | Zambia requests GM grain be removed. Ambassadorial meetings, international pressure, attempts to change the game, and the WFP's assessment of its ability to provide alternative food all happen | Malawi requests GM grain be removed. Ambassadorial meetings, international pressure, attempts to change the game, and the WFP's assessment of its ability to provide alternative food all happen | Stage 2 |

Table 1 Continued

| **Timeline** | **Zambia** | **Malawi** | **Stages** |
|---|---|---|---|
| Mid-August 2002 | Internal considerations and suspicion over U.S. motives cause Zambia to reject the food aid | | Stage 3 |
| September 2002 | | Internal considerations and lack of other viable options leads to acceptance of GM food aid | Stage 3 Continued |
| Autumn 2002 | Increasing pressures are put on Zambia, leading to further entrenchment of the country's attitude towards accepting the food | | Stage 4 |

leading to insight. The specific methodology is case studies in a structured, focused comparison using the congruence method. This methodology has similarities to process tracing, which helps explain the history of events, looking at the players in the game and how their actions, ideas, and interests helped the game play out the way it did. This study is loosely employing Mill's most similar construct, comparing cases studies of two countries that are quite similar and were faced with similar situations, but had a different outcome.

I use several sources for information. The first is interviews with people involved in the decision in Zambia and Malawi in 2002. Their insights and information allow me to form a clear picture of what their role was, what their actions were, and why they acted the way they did. These interviews add to being able to tell the story. The second major source I use is newspaper articles written at the time. This allows for an in-depth look at what the thinking was at the time and what the people were being told about what was happening.

## 1.7 Background

The famine that had been forecast in 2001 hit Southern Africa by July of 2002. At that time, 14 million people were at risk of starvation. Though earlier calls for help had gone unheeded, once the famine started in full force, the WFP called for help in famine relief. The U. S. contributed half of the needed food to the WFP. Lesotho and Swaziland, heavily connected to the United States through trade by its African Growth and Opportunity Act, both quickly agreed to receive the food aid the WFP was promising. Malawi, Mozambique, Zambia, and

Zimbabwe all initially declined the food aid, citing concerns over the genetically modified food that would be included in the U.S.'s shipments. Eventually, three of those countries, Malawi, Mozambique, and Zimbabwe relented and agreed to accept genetically modified food aid, if it was milled first.[2] Zambia continued its resistance.

Though it is easy to blame the weather for the inability of the African people to feed themselves, it is too simple an explanation. Amartya Sen (1981) argues that famines do not arise from a change in weather patterns, though certainly they are a factor. Instead, Sen argues that famines occur when people are not able to secure access to food, whether that is due to poor weather, bad infrastructure, or a lack of food. Watts (1991, 10) argues that the world has not understood famines in the past because they have failed to take into account that famine is not the failure of any one system, but rather the failure of the political, economic, and social systems. Watts further argues in another article that being poor is not necessarily an indicator that one will go hungry in a famine. Rather, one must take into account the vulnerability of citizens to famine, that is, their risk to exposure of crises or shocks, their capacity to handle those shocks, and the ability to recover from said shocks (Watts 1993, 118). Using these criteria, one can better understand the famines in Zambia and Malawi. This dissertation will look at the separate decisions of Malawi and Zambia.

[2] Staff Reporter, "Milling GM Food Aid Costs Malawi US$20 Million," *The Nation,* September 11, 2002, http://www.afrol.com/News2002/maw014_gm_foodaid.htm (accessed November 11, 2017)

### 1.7.1 Zambia: History

Zambia is a landlocked country in southern Africa, with an area roughly the size of Texas. Much of Zambia is occupied by a plateau, meaning that temperatures are more moderate than other similar areas of southern Africa. Zambia has a rich tribal history, with tribes such as the Bemba, the Lozi, and the Lunda having lived peacefully next to each other for centuries before Westerners discovered their lands. Zambia was originally discovered for the West by the British explorer and missionary David Livingstone, with British settlers following in the 1880s. The British began to take a much greater interest in Zambia once its vast copper resources were discovered, when the British South Africa Company received a Royal Charter to explore, develop, and administer what was then called Northern Rhodesia. Zambia remained a British colony until 1964, 10 years after Kenneth Kaunda founded the Zambia African National Congress (ZANC), originally intended to fight for Zambian voting and civil rights. Massive protests and riots eventually convinced Great Britain that Zambia should become an independent nation, and in January 1964 a new constitution was introduced, granting internal self-government and the right to elections. ZANC, now renamed the United National Independence Party (UNIP), emerged from the first election as the majority party, with Kenneth Kaunda as president. Full independence was granted in October of 1964.

Since that time, Zambia has enjoyed a relatively peaceful, stable, though not always fully-fledged democracy. Kaunda's initial term lasted 27 years, and his one-party system gave way to a multiparty system in 1990, once he was ousted

from office. Protests over changes in the constitution have hindered but not stopped the multiparty democracy. Currently, Zambia is a presidential representative democratic republic, with the president serving as head of both state and government. Legislative power is vested in both the executive government and parliament, known as the National Assembly.[3]

### 1.7.2 Zambia: Causes of the 2002 Famine

Zambia faced many of the same challenges as Malawi. It too was subject to erratic rainfall followed by periods of drought, and then in the middle of the droughts sudden downpours would flood still-growing crops at critical stages. In addition, many farmers were unable to obtain seed and fertilizer until late in the growing season, limiting the amount of time the crops had to grow. The bad weather and poor infrastructure meant that Zambia's grain production was down 33% for the 2001-2002 season (GAO 2003, 9-10). Zambia faced other challenges, including already widespread poverty. At the time, 64% of Zambia's citizens lived on less than a dollar a day and 59% of children under five were

---

[3] BBC, "Zambia Profile, Timeline," http://www.bbc.com/news/world-africa-14113084, (accessed November 1, 2017); Encyclopedia.com, "Zambia," http://www.encyclopedia.com/topic/Zambia.aspx (accessed November 1, 2017); Encyclopedia Britannica, "Zambia," http://www.britannica.com/place/Zambia (accessed November 1, 2017); History World, "History of Zambia," http://www.historyworld.net/wrldhis/PlainTextHistories.asp?historyid=ad27 (accessed November 1, 2017); Local Histories, "A Short History of Zambia," http://www.localhistories.org/zambia.html (accessed November 1, 2017); The Commonwealth, "Zambia: History," http://thecommonwealth.org/our-member-countries/zambia/history (accessed November 1, 2017); Zambia Government, http://www.zambia.gov.zm/ (accessed October 28, 2017); Zambia Tourism, "The History of Zambia," http://www.zambiatourism.com/about-zambia/history (accessed November 1, 2017)

malnourished. In addition to creating orphans on an unprecedented scale, HIV/AIDS had created (and still is contributing to) a situation in which many people who could otherwise contribute to the economy were unable to contribute because of their illness. Households with an HIV/AIDS patient earned 30-35% less than those without. This in turn placed the burden of providing both financial and health care on a smaller and smaller segment of the population. In Zambia, an estimated 22% of the population was infected. HIV/AIDS infection rates were higher among women, and women make up roughly 70% of the agricultural labor force (GAO 2002, 11-12). Zambia also faced charges of poor governance and corruption. The elections that had taken place in late 2001 resulted in a fractured political system. The Movement for Multiparty Democracy, which had been solidly in power for 10 years, failed to do as well as anticipated in the elections and was forced into a mixed-party government for the first time in the history of Zambia's democracy (Burnell 2002, 1106). This further weakened governance in the country.

### 1.7.3 Malawi: History

Malawi is a long, thin, landlocked country in southern Africa. Its tribal history is one of invasions by outside tribes, with eventual peace coming during the 19$^{th}$ century. Malawi became known to Westerners through the missionary and explorer David Livingstone, who arrived in 1859. More British missionaries, traders, and farmers followed him and in 1891 the country was declared the British Protectorate of Nyasaland. In 1953 Great Britain attempted to unite

Nyasaland with Northern and Southern Rhodesia. This move was opposed by many, including Dr. Hastings Kamuzu Banda. Banda was arrested in 1959, but was released in 1960, and helped consolidate the movement towards self-government and eventual independence. Independence from Great Britain was granted in July of 1964, with Banda as Prime Minister.

In 1966, Malawi became a republic, with Banda serving as a President with a wide array of powers. As is usual with nascent African democracies, Malawi was initially and for many years a one-party state, with the Malawi Congress Party (MCP) serving as the single party of power. Through the decades, state-wide unrest grew, and demands for change and a multiparty system led to demonstrations and riots. Parties like the Alliance for Democracy (AFORD) and the United Democratic Front (UDF) were formed in opposition to the MCP, and in 1993 their voices were heard in a referendum on the one-party system. Malawi is now a multiparty republic, and has an elected President who may serve no more than two five-year terms. The president serves as both the head of state and government. The legislative body, the National Assembly, is unicameral, with members also being elected for five-year terms.[4]

[4] BBC, "Malawi Profile, Timeline," http://www.bbc.com/news/world-africa-13881367 (accessed November 1, 2017); Encyclopedia Britannica, "Malawi," http://www.britannica.com/place/Malawi (accessed November 1, 2017); Local Histories, "A Short History of Malawi," http://www.localhistories.org/malawi.html (accessed November 1, 2017); Our Africa, "Malawi: History and Politics," http://www.our-africa.org/malawi/history-politics (accessed November 1, 2017); The Commonwealth, "Malawi: History," http://thecommonwealth.org/our-member-countries/malawi/history (accessed November 1, 2017); The Malawi Project, "History," http://www.malawiproject.org/about-malawi/history/ (accessed November 1, 2017)

### 1.7.4 Malawi: Causes of the 2002 Famine

Bad weather conditions combined with poor governance and international pressures all contributed significantly to the famine in 2002. The years preceding 2002 were characterized by erratic weather in the form of heavy rains. These heavy rains were then followed by long periods of drought. This meant a severe reduction in the amount of corn produced (GAO 2003). The weather problems were exacerbated by poor infrastructure, including a poorly functioning agricultural sector leading to food shortages and a reduction of available labor force stemming from the toll of the HIV/AIDS epidemic.

The poor weather patterns meant that the famine should not have come as a surprise to any of the nations in Southern Africa; the warning signs were there, but little was done to shore up the food reserves that Malawi had managed to accumulate. In 2002, just before the famine truly began to be felt, the government of Malawi made the decision to sell off their grain reserve in order to begin paying back loans to international financial institutions (Zerbe 2004, 596). Politicians in the U.S. were quick to condemn Malawi's actions, with Representative Benjamin Gilman stating:

> Although the flooding that destroyed much of last year's harvest and the dry weather are the primary causes of the food crisis, politics has also played an important role. The fact that Malawi's grain reserve was recently sold off without any clear explanation raises some very serious questions as to the ability and the willingness of the regional governments to act decisively on this issue and to come to the aid of their own people. (US House of Representatives, 2002, p. 17)

However, Malawi maintained that it had been forced to sell off its grain reserve at the urging of the International Monetary Fund (IMF) and World Bank

(WB) in order to help pay back commercial loans made to buy surplus maize in past years (Zerbe 2004, 596).[5] The original request from the World Bank was that Malawi sell off 28,000 of their 165,000 metric tons. The IMF went further, demanding that Malawi reduce their reserves to 60,000 metric tons, which was more in keeping with what Malawi had traditionally kept in reserve and what a commissioned study had recommended to combat any localized disaster. Malawi went even further and decided to sell off the entire reserve in early 2001, before information on the 2001 harvest was available. Had the 2001 harvest been as plentiful as previous years, Malawi would have been able to easily refill its reserves. However, a bad harvest meant the reserves could not be filled. In addition, famine early warning systems had predicted a maize shortfall but also predicted that the missing maize would be more than compensated for in other crops. This turned out to not be true.[6]

The situation continued to get worse as accusations of corruption and poor governance were leveled at Malawi, leading to a suspension of debt relief services by the IMF and suspension of aid by the U.S., the EU and United Kingdom. In addition, Malawi's creditors demanded that they suspend all food and farming subsidies and let the market determine food prices (Pettifor 2003). As the famine grew worse, this series of events led to spiraling food prices and

[5] It is beyond the scope of this project to delve further into the actions of the IMF, WB, and the Malawian government, but this is a complicated story and it is not entirely clear who is to blame. The accused culprits range from a corrupt government in Malawi to the IMF for forcing unreasonable policies such as privatization that did not take into account Malawi's specific circumstances. Malawi's domestic situation and its consequences for accepting the genetically modified food aid will be discussed further in Chapter 6.

[6] International Monetary Fund Factsheet. "Malawi—The Food Crises, the Strategic Grain Reserve, and the IMF." July 2002. https://www.imf.org/external/np/exr/facts/malawi.htm (accessed September 6, 2017).

the Malawian government being forced to obtain yet more credit in order to purchase grain on the international market (Zerbe 2004, 597). Because Malawi was in a much worse position than Zambia, their considerations were different. Malawi was in a truly desperate situation, with many of its people at risk of starvation, and some already having succumbed.

## 1.8 Case Selection Justification

There is ample reason to compare Malawi and Zambia: both countries have similar histories and have similar population levels. They share the same geographic region. Though Zambia is roughly seven times bigger than Malawi, the amount of arable land in each country is such that they have similar amounts of land available to produce crops. In addition, Malawi and Zambia are both former British colonies liberated in the same year and share similar governmental structures based on the British system. In addition, they have tribal and language ties. On the other hand, Zimbabwe, with its long history of oppression at the hands of Robert Mugabe and its subsequent lack of democracy, presents a different picture. Mozambique also has an extremely troubled past and was not a British colony, presenting a much different picture for comparison.

Zambia plays the larger role in this dissertation for several reasons. First, Zambia is the bigger country and received more attention in the media, making access to information more easily obtained. Second, the decision was both more controversial and more acrimonious in Zambia. President Mwanawasa, with his dramatic declaration of preferring to die to eating genetically modified food, was a

polarizing figure, and as such drew a great deal of attention.

## 1.9 Layout of the Dissertation

This dissertation takes the following format: Chapter 2 provides a literature review of game theory in general and two-level game theory in particular. Chapter 3 is a more thorough treatment of the methodology used in this dissertation, with an explanation of sources and why they were used. Chapters 4 through 6 each discuss one of the hypotheses, how they should have worked, their background, and the results of interviews and research. Chapter 4 involves Level I, the international component, and the role the international community played in the respective decisions by applying different kinds of pressure. Chapter 5 explores Level II, the first domestic factor. This factor is the civil societies in each country, and how they played a role in the decision-making process by providing information and attempting to influence the government. Chapter 6 also explains a Level II domestic factor, that of various internal considerations both countries had to take into account before making their decisions. Some of these considerations include opposition political parties, protective legislation, and public opinion. Chapter 7 concludes with an assessment of how the objectives and research question were answered, how well the dissertation fits Putnam's framework, and what the dissertation contributes to the literature.

# CHAPTER 2

# LITERATURE REVIEW

## 2.1 Introduction

This dissertation contains multiple topics that have been discussed in scholarly literature. This literature adds to the knowledge and complexity of the subject by explaining concepts used in the dissertation and showcasing differing viewpoints of those concepts. This chapter starts with a review of how game theory, the theoretical framework being used in this dissertation, has been used in International Relations. The focus is then narrowed to two-level game theory, what it means, how it has been used in the literature, and how it will be used in this dissertation, including examining how domestic politics play a critical role in the theory. The chapter will then discuss the broad subject of GMOs by looking at several areas crucial to this dissertation. The first area is the debate and differing policies of the U.S. and EU in regard to GMOs. The second area is the Cartagena Protocol on Biosafety and the role it plays in the GMO debate. The next area provides a discussion of GMOs in the developing world, their potential and the pitfalls in using them, as well as factors involved in getting use of GM technology approved, specifically in Africa. The last section will examine genetic modification as it pertains to food aid. This section includes an overview of the

literature on the 2002 decision Zambia and Malawi to accept or reject genetically modified food aid.

## 2.2 Game Theory in International Relations

Game theory is often used in international relations literature as a model for how the international system functions because it involves a situation where no outside authority exists to enforce agreements between players. This is echoed in the anarchy of the international system, which lacks an overarching authority figure to enforce agreements between states.

Game theory is used in two general ways in international relations literature. The first involves heavy use of the theory behind it and explanations that involve modeling and mathematical formulas. Those scholars (see Alt, Calvert, and Humes 1988, Axelrod 1981, 1984, Jervis 1988, Oye 1985, Sebenius 1992, Snidal 1985, 1985a, and Tingley 2011) who explore this aspect of game theory tend to emphasize theory over application and, indeed, a great deal of their research tries to show why different games either cannot be applied to real world situations or how they must be modified in order to pertain to real world situations. Some, like Tingley (2011) and Axelrod (1981, 1984), never do any application, instead preferring to run experiments in a lab.

Focusing on theory has its uses. A deeper exploration of theory helps us understand the theory and its applications better. This thorough understanding can then lead to explanations of possible scenarios if states were actually applying the rules of the game in their relations with one another, though if they

were not game theory is less helpful. In addition, deeper understanding may suggest other avenues of research (Snidal 1985, 33).

The second way game theory is used is to combine a fairly deep theoretical perspective with in-depth analysis of the particular situations in the games. This approach is less common but is important for this dissertation. Though many scholars choose to disregard application in favor of purely theoretical work, using game theory in international relations research often has advantages. Jervis (1988, 319) argues that game theory is a fruitful avenue of research because it uses the central characteristics of international relations, it is parsimonious, and it brings together the study of conflict and the study of cooperation, which allows it to give wider explanations. Snidal (1985, 28) argues that, “the deductive apparatus of game theory allows us to infer new understandings about international politics.”

The relative strength of the use of game theory depends on what it is being used for. If the purpose is application to specific situations Snidal (1985, 55) argues that its usefulness will indeed be limited, but if the purpose is to understand international cooperation more generally then the conclusions that can be drawn from game theory are very valuable. This dissertation attempts to use application in both of the ways Snidal discusses. It applies game theory to a specific situation in order to understand what happened in that situation, but the dissertation also discusses how the situations that occurred between developed and developing countries lead to a better understanding in general of the pressures and complexities between the two worlds.

## 2.3 Two-level Game Theory: An Explanation

Robert Putnam (1988) belongs to the second group of scholars who, while focusing on theory, also see that it has practical applications for explaining real world situations. This section discusses Putnam's argument with specific reference to what happened in Zambia and Malawi in 2002. In "Diplomacy and Domestic Politics: The Logic of Two-level Games" and other subsequent works, Putnam began to explore using game theory in a different way. Putnam began to look at more complex game theoretical models in order to be able to provide more nuanced explanations of events involving both international and domestic levels. Putnam capitalized on the movement by Gourevitch (1978), Katzenstein (1978), and others who believed that the field of International Relations was insufficiently paying attention to the causes and effects of the international system on domestic politics and vice versa, and that theories would never be complete unless the domestic was taken out of the black box it had been put in by other schools of thought. Instead Putnam, etc. wanted to look at all aspects of domestic politics:

> A more adequate account of the domestic determinants of foreign policy and international relations must stress *politics*: parties, social classes, interest groups (both economic and noneconomic), legislators, and even public opinion and elections, not simply executive officials and institutional arrangements. (Putnam 1988, 432)

In this school of thought, the question of how domestic behavior can best be accounted for is answered by eliminating the traditional false dichotomy of searching either international or domestic politics for the explanation. Putnam took this mandate to study both levels and began working on a game theory that

would help explain what was happening when states were engaged in international bargaining.

Two-level game theory begins by assuming that statesmen have more than one level of concern when navigating certain events. Essentially, they must play the game at the domestic level at the same time they are playing on the international level. This means that they seek to satisfy the international institution or country's demands and requests while at the same time answering to entities within their own country such as civil society, opposing political parties, and public opinion. This can make the game a delicate balancing act. If the international institution is not satisfied with what the statesman can offer, they may withdraw from negotiations. Likewise, if the statesman presents a bargain that is unsatisfactory to civil society, citizens, or political parties, they may choose to either not ratify the decision if there is a formal ratification process, or, in a democracy, they may later punish the statesman electorally. Each level must be tended and each level may have an effect on the other level. As Putnam states:

> At the national level, domestic groups pursue their interests by pressuring the government to adopt favorable policies, and politicians seek power by constructing coalitions among those groups. At the international level, national governments seek to maximize their own ability to satisfy domestic pressures, while minimizing the adverse consequences of foreign developments. (1988, 434)

The importance of viewing events from a two-level game perspective can be seen by its application to the real world. Two-level game theory eliminates the thinking that rational acts are always rational. In these games and their iterations, that which is rational on one level may not be wise at the other level, and may destroy negotiations or partnerships (Putnam 1988, 434).

According to Pahre and Papayoanou (1997, 5) game theory is well suited to help link domestic and international politics because, “it provides scholars with what we refer to as rigorous flexibility. Its central concepts (e.g., utility, choice, strategy, structure, information, and signals) and mathematical logic provide the rigor, but scholars have substantial flexibility in applying the method to specific problems.”

In order to begin fleshing out the theory, Putnam looks at a hypothetical situation. In stage one of the process there is bargaining between negotiators, the statesman and the representative of the international institution or country, leading to a cautious agreement that cannot be finalized until the negotiations of stage two. This is Level I, or the international level, because on this level the statesman, who represents the state, is trying to satisfy an institution outside his own country. In stage two there are discussions within groups of domestic constituents to decide whether to accept the agreement completed in stage one. This is Level II, the domestic level. Any revision of the agreement arising from discussions in Level II requires a renegotiation at Level I and thus further stages (Putnam 1988, 436-7).

For the purposes of this dissertation the situation is framed theoretically this way: Zambia and Malawi went to the WFP and the U.S. to ask them to send food aid that was not genetically modified. Discussions ensued, but it was unclear what the WFP could do and what the U.S. was willing to offer. This was Level I, the international level. However, both countries had another side to deal with. On the domestic side, Level II, both governments had a host of groups and

issues to consider. These included civil society groups, scientists, public opinion, the peril people were in, opposing political parties, the perception of the EU, and possible damage to the country's ecosystem. Both levels were important to the process and what Zambia and Malawi could ask for and what they could get depended on elements on both levels. Level II and what was acceptable on the domestic side had to be considered when thinking about Level I and what they could get.

Putnam describes the set of agreements that would win approval from constituents at Level II as a win-set. The larger the win-set, the easier it is to gain Level I agreement because Level I negotiators have a wider variety of outcomes to choose from. If the win-sets of the two sides, international and state, do not agree, either conflict between the two becomes inevitable because there is no common ground to fall on or the entire agreement is at risk of failure because no agreement can be reached. In addition, the larger the win-set the more the statesman working in Level I must be careful not to be pushed around due to the large number of choices he has. The more difficult the ratification process at home will be, the stronger negotiating position statesmen have on Level I. This is because they are constrained by their own systems and therefore cannot agree to much without consent from their citizens and other groups.

Win-sets are determined by preferences, coalitions, and institutions on Level II, as well as the negotiating strategies on Level I. Strong preferences, coalitions, and institutions give the statesman on Level I less leeway and make the possibility of ratification more difficult should the statesman choose to push

for an outcome contrary to Level II interests (Putman 1988, 436-44). Both Zambia and Malawi had issues that could have expanded or contracted their win-sets, including domestic institutions, their domestic constituents, the political level and relative political power of the decision makers, the desperation of the citizenry, and their weak positions on the world stage.

Domestic institutions also determine the size of the win-set. If a central government is strongly disciplined, the win-set is expanded because of the ability to agree to things without fully taking into account the preferences of other constituent groups, as well as the guarantee that any position taken by the statesman will be supported by the government. On the other hand, if a statesman and his government seek broad consensus, the win-set shrinks considerably because of the difficulty of getting many groups and individuals to agree to one proposition.

In the conclusion to the book, Double-Edged Diplomacy, Peter Evans (1993, 414-16) reflects on how enfranchisement affects the size of win-sets. In general, the literature seems to suggest that the more democratization there is in a country, the smaller the win-set because the statesman is more constrained by and cognizant of the will of the people. However, Evans points out that the examples included in the book, including those in the chapter by Martin and Sikkink (1993), titled, “U.S. Policy and Human Rights in Argentina and Guatemala, 1973-1980,” and the chapter by Kahler (1993) titled, “Bargaining with the IMF: Two-level Strategies and Developing Countries,” seem to suggest that there is less correlation than previously thought. In fact, in Guatemala, one of the

countries used by Martin and Sikkink (1993), restricted enfranchisement contributed to a smaller win-set and more discipline in pursuing that win-set. In Guatemala, the elite were enfranchised and held sway. The military and government managed to successfully convince the U.S. that the human rights abuses committed had not been committed by either the government or military, but rather were the acts of antigovernment groups (Martin and Sikkink 1993, 346-347). Martin and Sikkink (1993, 351) argue that this tactic allowed the Guatemalans to successfully narrow the win-set by taking some of the demands for reform made by the U.S. completely off the table. If the Guatemalan government was not responsible for the atrocities being committed, stopping them could not be part of their win-set. Guatemala successfully changed the conversation.

Democracy did not seem to play a role in the size of win-set for either Zambia or Malawi, since, while there was some consultation with scientists and some groups tried to push for their position, neither country consulted their lay citizenry before making their decision. The ratification process, which Putnam (1988, 436) states can either be formal or informal, was, in these cases, informal. Neither country held a formal vote in parliament or a referendum for the people, instead seeking recommendations from committees. Though there were many forces within each country pushing for the food to be accepted, ultimately the decision was unilateral.

Zambian President Levy Mwanawasa and the Zambian government may have been concerned about re-election should their decision lead to people's

starvation. However, this concern seems to have been mitigated by the very effective campaign against genetically modified food conducted in both countries. The decision being made at the highest levels of government could have expanded the win-set of both countries, since one of the determining factors in win-set size is the need for ratification and there was no ratification process, but in the end both countries used the unilateral nature of their decision to restrict the win-set by keeping the acceptable outcomes, in other words those outcomes they would accept, narrow.

The decision was made at the highest levels of government, which indicates autonomy from the pressures of Level II bargaining. According to Putnam, this weakens the bargaining position of the player: “However, two-level analysis also implies that, *ceteris paribus,* the stronger a state is in terms of autonomy from domestic pressures, the weaker its relative bargaining position internationally.” (1988, 449) A government with a high degree of autonomy has a weaker bargaining position in international matters because it does not have to consult its citizens before acting. Protests that a government cannot agree to a certain proposition are weakened because it is obvious to all parties that the government can agree to almost anything they wish to without asking citizens or fearing electoral consequences because of the decision.

As previously stated, the win-sets of both countries were limited by the desperate situation they were in. Zambia and Malawi had a limited number of sources for the food their people needed. Practically speaking, their win-set included one item: convincing the U.S. to remove any genetically modified food

from their food aid shipments. In Putnam's terms, that was the set of all possible Level I agreements that would win approval on Level II, among the constituents (1988, 437). Neither country was successful in convincing the U.S. The other alternative each country had was to have the food milled before it entered the country. However, this was not a cost the U.S. paid. Instead, it was up to the country to arrange for the milling, a time-consuming and expensive proposition.

The win-sets of the U.S. are a different case. For this case, the win-set consisted of Zambia and Malawi accepting the food aid as offered. However, the U.S., beyond a concern for the lives of the people of Zambia and Malawi, had no incentive to truly negotiate with the countries, or to comply with their requests to remove the genetically modified food from the shipments. The U.S. was not going to be hurt economically in terms of trade if Zambia and Malawi did not accept the food. In addition, the rejection of the food aid would mean it could go elsewhere and benefit others. While there was some criticism of the U.S. pushing genetically modified food, ultimately the U.S. was offering to help. In addition, the U.S. was restricted in change by several factors including the nature of a bureaucracy, the rules already set in place for when and how food aid is distributed, and the ever-present agricultural and shipping lobbies who help determine much of USAID food aid policy.

Another concern in determining the win-sets of Zambia and Malawi was their relative positions on the world stage. According to Putnam, more self-sufficient states have smaller win-sets and can therefore better drive negotiations (1988, 443). Neither Zambia nor Malawi was self-sufficient or in a position to

make strong demands, and their position was weaker as a result. The difficulty of this position can be seen not only in the size of their win-set, but in the international pressures brought to bear by outside entities, discussed further in Chapter 4.

Another consideration Putnam discusses is that of uncertainty and how it changes bargaining tactics. According to Putnam, Level I negotiators are often badly misinformed about the politics of Level II, and this uncertainty has implications for bargaining (1988, 452). It is often impossible to understand the real situation in a country if one does not live there, and outside institutions can remain unaware of what will truly sway the citizens of a country, or even how the politics of a country actually work. This lack of knowledge leads to uncertainty because without a full picture of the domestic level, Level I negotiators are uncertain of what is acceptable and what is not.

Level I negotiators may not understand the size of the win-set for Level II, but will obviously understand their own position much better. In these circumstances, deals become difficult to make because Level I negotiators are uncertain of what can be ratified on Level II. For instance, in both Zambia and Malawi, there was a lot of confusion over whether genetically modified food was healthy or safe. In this case, because confusion reigned on Level II, Level I had even more uncertainty; because it may not have been clear what would happen on Level II, even to those on that level, certainly it would be impossible for Level I negotiators to predict. As Putnam states: “Uncertainty about party A’s ratification lowers the expected value of the agreement to party B, and thus party B will

demand more generous side-payments from party A than would be needed under conditions of certainty." (1988, 453) Because the U.S. was unaware of whether Zambia or Malawi would accept the food, there might have been more discussion and consideration of the idea of excluding genetically modified food aid from the shipments than there was.

A final important concern in determining the size of win-sets in two-level games is the strategy of the Level I negotiator, in this case the U.S., the WFP, and several other international institutions. Their specific tactics will be discussed further in Chapter 4, but according to Putnam the tactics used can vary in method: "…governments do seek to expand one another's win-sets. Much ambassadorial activity—wooing opinion leaders, establishing contact with opposition parties, offering foreign aid to a friendly, but unstable government, and so on—has precisely this function." (1988, 454)

Attempts at changing the win-set of Level II are really an attempt to restructure the game and change the minds of those on Level II as to what will be beneficial to them (Putnam 1988, 454). These change attempts are more difficult in a two-level game because negotiators on Level I may have no direct contact with constituents on Level II. However, sometimes these international pressures "reverberate" within domestic politics, change the course of negotiations, and influence what happens domestically (Putnam 1988, 454).

According to Putnam, reverberation can be problematic. Attempts at influencing domestic audiences can go badly if the source of the attempts is viewed as an adversary rather than an ally. However, if the influencer is

considered an ally, their attempts may be successful because domestic audiences do not want to offend the influencer as that may be costly in subsequent games (Putnam 1988, 454-455). One can see how this attitude would be especially important to consider in the case of developing countries, who are at the mercy of larger, more powerful countries. Reverberation is therefore a consideration in the decision-making process of Zambia and Malawi. The two countries were already at a disadvantage in the games because of their weaker position on the world stage, but that did not mean that they were willing to accept whatever the WFP and U.S. gave them. As will be seen in Chapter 4, a lot of rhetoric was employed by international institutions and leaders, trying to sway the opinion of the southern African countries who were considering rejecting the genetically modified food aid, or in other terms, to change their win-sets to include accepting the genetically modified food aid. In Zambia, these attempts were met with suspicion and distrust of motives. In addition, both countries were already at risk of negative reverberation because the West is sometimes viewed negatively by Africans. Thus, the stage was set for attempts at influencing the game to easily go poorly.

## 2.4 The Importance of Considering Domestic Politics

In his article "Second Image Reversed: The International Sources of Domestic Politics," Peter Gourevitch flips the script on Waltz's "second image" of the traditional way of only thinking about domestic politics and their effect on the international system. Instead Gourevitch argues that one must also think about

the international system's effect on domestic politics and structure. Gourevitch argues that using domestic politics as an independent or intervening variable is problematic because it treats foreign policy as a dependent variable, when in fact foreign policy may change the supposedly independent variable of domestic politics. Gourevitch also argues that treating domestic structure as an independent or intervening variable can make International Relations scholars treat it as irrelevant to their arguments (1978, 881). Putnam, referencing Snyder and Diesing, contends that, "The prediction of international outcomes is significantly improved by understanding internal bargaining." (1988, 435) If one looks at domestic politics as critical to a full explanation of events, then the international system becomes an explanatory variable in the story. Both sides of the coin are needed to understand the currency, and scholars who ignore one side do so at their peril.

Snyder and Diesing conclude that international outcomes can only be partially understood by looking at what the top leaders in the situations say. In half of the crises they studied, they discovered that top decision-makers failed to achieve unity in their thinking. Thus, Snyder and Diesing conclude that internal workings and arguments must be better understood in order to accurately predict international outcomes (Snyder and Diesing 1977, 510-25).

In the introduction of Between Power and Plenty: Foreign Economic Policies of Advanced Industrial States, Peter Katzenstein (1978, 3) discusses how domestic politics, specifically the domestic structure of the state, must be taken into account as an intervening variable in order to understand a state's

decisions fully. Katzenstein seeks to explore why challenges common to most states elicit very different responses. He contends that if different industrialized nations have different domestic structures and have different policy outcomes and responses to situations then it must be that domestic structure is one of the variables that can account for the difference in outcomes. Katzenstein (1978, 4) argues that explanations that focus solely on international and transnational interactions cannot adequately explain the difference in states' responses. The collection of essays he edits in Between Power and Plenty seek to discover why states respond differently.

Peter Katzenstein's book, Small States in World Markets looks at small states in Europe to discover how they differ substantially from larger states. He concludes that the balance between domestic and international considerations is different for small states because of concerns they have that larger states may not. International markets must be of bigger concern to them. I suggests that Katzenstein's theory holds true for developed and developing countries. Like smaller states, developing states looking to break into international markets must be more concerned about the gatekeepers of those markets, in the form of bigger and more powerful states. In the context of this dissertation, this theory would tend towards the argument that because Zambia and Malawi were developing countries, the balance between international and domestic concerns was different than it would be for developed states, and that in these cases the international concerns might hold more weight. Ernst Haas agrees that there must be different calculations for smaller, dependent states: "The more

dependent the government is on aid, trade, and investments, the more often it is likely to yield to such pressure." (as quoted in Martin and Sikkink 1993, 332) For Zambia and Malawi, their relative position and dependence on aid made them the weaker bargainer, less likely to win in any negotiation. In other words, it was never going to be easy for Zambia and Malawi, as smaller states, to convince the larger state, the U.S., to change their policies regarding the content and distribution of food aid.

## 2.5 Specific Examples of the Interplay of Domestic Politics and International Issues in the Developing World

The developing world necessarily interacts with the international system and with more developed countries in a unique way. Power imbalances mean that the developing country is always in a weaker bargaining position. This is true in times of need, when large loans must be procured from international financial institutions, and it is true in times of crisis when developing countries must accept the aid being offered, without much input on what that aid is, when it will come, or how it will be delivered. Gourevitch (1978, 888) discusses the differences between developed and developing countries, and how the system is set up to advantage the developed countries. According to him, the developed countries have set up a "system of pressures which sharply constrain, indeed, wholly determine the options available to developing countries." (Gourevitch 1978, 888) He goes on to say that:

> Since capital, organization technology, and military preponderance are in the hands of the core, the core countries are able to set the terms under

> which skill, capital, and markets will be provided to the periphery. The core forces others into subservience: suppliers of raw materials, purchasers of finished goods, manufacturers of whatever the core allows them to do. (Gourevitch 1978, 888)

This means that it is important to look at developing countries specifically when thinking about the interplay between domestic politics and the international system.

Not all scholars are specifically using two-level game theory when discussing the interconnectedness of international and domestic levels, but it is possible to see how the game is being played in their articles. Alt (1987, 151-2) discusses the ways in which looking at the domestic policies of Britain and Norway in regard to oil fail to capture the whole story. Alt argues that those who believe that Thatcherism alone is responsible for the decline in the economy and the rise in unemployment in the 1970s and 80s are not taking into account the fall of British trade competitiveness due to both domestic policy and structural change and speculative pressure on exchange rates. One of Alt's main points is that in democracies political leaders have incentives to shore up support amongst voters in order to stay in power. Political leaders manipulate instruments of policy in an effort to produce the outcome desired by their supporters. In these efforts they are constrained by ideas and institutions inherent in their political system. Alt argues that in smaller economies (such as Zambia and Malawi) trade dependence must be taken into account as a factor in the decisions of political leaders.

In their article, "International Economic Policy Coordination," Artis and Ostry (1986, 8) argue that international cooperation in economic policy is critical

because it improves the economy of the participating states. The authors argue that protectionist policies practiced by various states, including the United States, after World War II hurt the world economy and, by extension, individual state economies (Artis and Ostry 1986, 58-61). Their paper is another example of why the international and the domestic are intrinsically linked and must be used to explain one another.

Lisa Martin and Kathryn Sikkink explore how the international and domestic meshed together in their chapter entitled, "U.S. Policy and Human Rights in Argentina and Guatemala, 1973-1980" in the book, Double-Edged Diplomacy. Martin and Sikkink researched the bargaining between Argentina and the U.S. and Guatemala and the U.S. over human rights violations. This article is an especially important one to consider for this dissertation because it is an example of the U.S. negotiating with developing countries. They also point out that negotiations between Guatemala, Argentina, and the U.S. had several distinct features, one of which is particularly relevant for the purposes of this work—there was a severe power imbalance between the players, in the case of this study, Zambia and Malawi on one side and the U.S. on the other. The sides were unequal not only in terms of soft and hard power, but also in terms of payoffs. There was little consequence to the U.S. if the countries chose not to accept these particular batches of food aid, but the consequences could be severe and sometimes disastrous for Zambia and Malawi in the short term and possibly the long term if the U.S. had chosen to cut off aid because of a lack of willingness on the other countries' parts. In addition, in specific reference to the

human rights violations, Martin and Sikkink (1993, 347) point out that, “No government wants to admit publicly that it violates the basic human rights of its citizens, or that improvements in their treatment are due to the pressures of another government. Thus, diplomacy on human rights issues rarely becomes public knowledge…Governments engage in what we might call, ‘opaque negotiations,’ with no public or formal agreements to signify cooperation.” Or that it chose to let its people starve rather than accept food that their own scientists were saying was acceptable.

Lehman and McCoy discuss the debt negotiations Brazil conducted with the U.S. in 1992 in their article, “The Dynamics of Two-level Bargaining: The 1988 Brazilian Debt Negotiations.” In the article they argue for the efficacy of the two-level model in International Relations, stating that,

> Because of increased complexity, this model has greater explanatory power than a simple, one-level, unitary model. Strategic moves during the negotiation phase at Level I between the state and creditors are influenced by the game at Level II between the domestic constituents and the state because of the need for domestic constituents to ratify the final agreement at Level I. (Lehman and McCoy 1992, 603)

Lehman and McCoy (1992, 605-06) point out that politicians prefer international agreements that benefit their constituents. Lehman and McCoy (1992, 608) also make an important argument that is highlighted by the case they use. That is, in the bargaining process there are two possible strategies for negotiators. Either they seek concessions from their opponent until agreement is reached, or they offer concessions, requiring that they also convince their constituents of the wisdom of their actions. This back and forth can be seen in the cases of both Zambia and Malawi. In Malawi, after first asking for

nongenetically modified food aid and being denied, the next move was to make a concession: they would accept the food as long as it was milled first. In Zambia, concessions were sought from the U.S. but never granted, making the bargaining process (inasmuch as one can call it a bargaining process with such a power imbalance) break down.

In his chapter on how developing countries negotiate with the IMF, Kahler (1993, 364, 369) raises an interesting point about why developing countries might choose to go against what seems to be their best interest. Kahler argues that the puzzle can at least be partially solved by looking at the internal politics of each country. Kahler (1993, 369-370) posits that there are three considerations when looking at how the win-sets of developing countries are expanded and contracted, and the politics involved in the decision. The first is that there may be ideological objections to the international organization's proposed strategies. Kahler states that such resistance is likely to be more prevalent in countries where ideological lines are prominent in the political life of the country. The second consideration is that nationalism may come into play, with players within the country objecting to pressure or direction from an outside source. These objections may come from different sources, whether they be governmental or originate from civil society, citizens' groups, etc. The third consideration is economic in nature. Kahler is arguing specifically about economic changes brought about by proposed structural adjustments, but the economic argument stands in this case, as the actual argument is about forces and organizations within a country that would be affected by the international organization's

proposed actions.

Stephen M. Magu's 2015 article, "Dilemmas of East African Cooperation: Domestic Audience and Prisoner's Dilemma Approaches on Regional Integration" is an excellent example of how game theory can be used to illustrate situations in the developing world. Though he does not use two-level game theory specifically, Magu discusses the cooperation amongst East African countries over the last century, with specific reference to Tanzania's decision to leave the East African Cooperation (EAC) agreement. Magu uses game theory to argue that Tanzania was in a Prisoner's Dilemma with other countries, where cooperation was most desirable but could not be trusted. Rather than an attempt to play the game well, Magu suggests that it was Tanzania's domestic audience that made the decision for the state. In this case, in the interaction between international pressures and domestic concerns, domestic concerns won (2015, 396).

Andonova (2008) studies the effect of the Kyoto Protocol on Russian climate change policy to show that international policies and agreements must be taken into account when exploring change in policy. She uses Gourevitch's "second image reversed" question to show that the Kyoto Protocol had an effect in several ways. First, it altered the costs and benefits for the climate regime in the country through redistribution of resources (Andonova 2008, 484). It also changed political interests in more subtle ways through capacity building and a more thorough diffusion of economic assessments. Andonova's main dependent variables are domestic political processes rather than the more traditional

aggregate of state behavior or policies (2008, 485). This helps give a clearer picture of more subtle mechanisms at play.

Mistry (2015) uses two-level game theory to look at negotiations between the U.S. and India regarding nuclear proliferation. India accepted safeguards on its nuclear facilities along with some restrictions on nuclear testing. In turn, the U.S. recognized India's nuclear status and lifted barriers to civilian nuclear trade. Mistry points out that Putnam's framework provides the best answer to how successful nuclear negotiations will be; negotiations will be successful when technical details win domestic approval in both negotiating countries.

The scholarly works discussed are useful in showing how two-level game theory can be applied to the developing world. It is a framework that fits well because of the different relationship the developing world has with the developed world, international financial institutions, and the international community. It is an important area to consider for the field of International Relations.

## 2.6 U.S. vs. EU Policy and Attitude Towards GMOs

Since GM technology began to become prominent in the mid-1990s, the U.S. and EU have been at odds in their attitudes towards the technology, how to regulate it, and whether it was helpful or harmful for humans and the environment. Much has been written about the differences between the two. This section will briefly cover some of that debate. The next section will examine how the debate affects Africa, and then discuss whether fears of what loss of EU trade would do to African countries are exaggerated. Finally, the next section will

look at the Cartagena Protocol on Biosafety, what it is and how it influences policy in the developing world.

In 2003 the U.S. brought a complaint to the World Trade Organization (WTO) against the EU, charging that the EU's failure to approve the importation of genetically modified crops from 1988 to 2004 constituted a *de facto* moratorium that was without scientific basis. The U.S. charged the EU with thus ignoring the Agreement on the Application of Sanitary and Phytosanitary Measures and declaring that the EU was engaging in unfair trade practices (Pew 2005, 2). In 2006, the WTO ruled that the EU had indeed violated the agreement. However, by then it was a moot point because the strict ban had ended in 2004, some think because the EU knew the ruling was going to go against them (Peterson 2010, 10).[7]

Since that time, the rhetoric and competition between the U.S. and the EU has not changed. The debate takes place on two major fronts: scientific uncertainty and ethical concerns, that is, whether crops, food, and feed are sustainable, and whether they should be given to humans and animals before the long term consequences are known (Peterson 2010, 2-3).

In a case study over the dispute over regulation, Peterson (2010) points out that there are several sources of the dispute. The first is in how regulations are made and enforced. In the U.S. the regulations are centralized, with rules coming from the Food and Drug Administration, the Department of Agriculture,

[7] Euractive, "EU GMO Ban was Illegal, WTO Rules," May 12, 2006, http://www.euractiv.com/section/trade-society/news/eu-gmo-ban-was-illegal-wto-rules/ (accessed November 7, 2017.

and the Environmental Protection Agency. In contrast, the EU has a decentralized rule-making procedure with the EU Commission and agencies co-existing with national agencies. However, the U.S. has a more decentralized rule-enforcement mechanism because of the number of entities that may bring suit while the EU also contends with power struggles between the EU Council, European Parliament, and other agencies (Peterson 2010, 4).

In addition, since the Reagan administration in the 1980s, the U.S. has focused on whether the technology is safe for humans to grow and consume, whereas the EU has focused on using the precautionary principle, which mandates that a new technology or activity be avoided until its long term consequences are known (Peterson 2010, 5). The U.S. and the EU differ fundamentally in their approach and their beliefs about how GM technology should be handled.

This dispute has now spilled over into the rest of the world, with some countries like Canada, Mexico, China, and Australia following the U.S. example and allowing but regulating the growth of GM crops and some like Japan following much of the EU in banning growth (Sheikhha 2017, 81-82). The discussion has become especially important in the developing world as countries debate whether it is safe or economically wise to import or encourage the growth of GM crops within their borders. Differences in regulations lead to trade disputes that developing countries can ill afford (Gostek 2016, 762).

Africa in particular has been affected by the debate. Indeed, this dissertation exists partially because of the debate between the U.S. and EU.

Scholars have looked at the effects. Robert Paarlberg (2010) has been critical of the EU's stance on GMO food and crops. In his article, "GMO Foods and Crops: Africa's Choice," Paarlberg contends that there is scientific consensus that GMO foods and crops pose no risk to either humans or the environment, and that the EU has known this since 2002, yet the EU remains recalcitrant in its reluctance to change position (2010, 609-610). Paarlberg argues that this is because Europeans do not stand to benefit by accepting GMO foods and crops and are not hurt by not accepting them. Paarlberg contrasts this with the very different situation Africa is in. Paarlberg points out that where introducing GM technology to European farmers would only benefit a small percentage of them, 60% or more of Africans are still connected to farming, and would benefit greatly from the technology. Paarlberg lists several areas where Africans would benefit, including insect resistant crops with less pesticide use and drought tolerant maize (Paarlberg 2010, 611). However, African countries must allow trials in-country to discover how they work in their environment. This is a hurdle many nations are reluctant to do away with (Paarlberg 2010, 611).

Morris (2011) also argues that GM technology could play a large role in Africa, but points out that there are barriers to this, some of them courtesy of the U.S. and EU dispute. In sub-Saharan Africa, countries are limited in the amount of money they can spend on developing GMOs and ensuring their safety. Because the governments do not contribute enough to the scientific community, the community relies on international agencies for funding, which in turn makes them susceptible to the funding source's attitude towards GMOs (Morris 2011,

809). Morris argues that there are several viable alternatives for African countries to escape being caught in the middle of the dispute. The first is to move away from North-South consulting and turn to South-South consulting, with developing countries helping each other rather than turning to the North for help (Morris 2011, 817-818). The second solution is for African governments to begin to recognize the critical role GM technology could play in their country's future, and invest more heavily in it (Morris 2011, 819). This will allow them to escape the dispute between the U.S. and the EU and better determine their own future.

### 2.6.1 Is the Fear of the EU Exaggerated?

While it might be beneficial for African countries to be able to escape the dispute between the U.S. and EU, there are some scholars who contend that the debate is overblown and that the EU is not as much of a threat to trade as may be perceived by African countries reluctant to adopt GM technology. Anderson and Jackson (2005) focus on the implications for African countries once they have biotechnology policies in place. They do this by examining the potential gains for countries in sub-Saharan Africa if they choose to grow genetically modified crops. The authors use a global economy model to show the effects of countries adopting the new technologies. The model illustrates the "vertical and horizontal linkages between all product markets both within the model's individual countries and regions as well as…their bilateral trade flows." (Anderson and Jackson 2005, 388)

The factors Anderson and Jackson consider are current production versus

genetically modified crop production, production shock, and consumption. Taking the model through a series of scenarios, the authors show that, even in the presence of the EU's current barriers, the potential advantages to adopting GM technology outweigh the potential disadvantages. Anderson and Jackson argue that adopting the GM technology would lead to improved health outcomes, and greater productivity (2005, 398, 401). This article is especially critical because of the authors' inclusion of EU policy and subsequent trade implications.

In the article, "Economic Impacts of Policies Affecting Crop Biotechnology and Trade," Anderson (2010) again seeks to show that the potential for gain in adopting GM technology outweighs the losses that might be incurred because of the EU's restrictive import regulations. Anderson shows that trying to maintain GM free crops and food by restricting what farmers can grow creates more of a disadvantage for those within the country in terms of both food consumers in-country and farmers (2010, 561-562).

Gruere and Sengupta (2009) also contend that fear of loss of imports to the EU have caused irrational policies in developing countries. The authors study standards set up by private corporations and how those standards have affected the policy decisions of developing countries. Gruere and Sengupta (2009, 399) found 29 of these cases. Most of the cases were issues of excessive precautionary measures being taken by developing countries for fear of EU policies. The authors contend that this is because of two misleading premises. The first is that the EU and Japan (who is also opposed to GMOs) represent the biggest or only possible export markets. The second is that

segregation of non-GM and GM crops is cost prohibitive and infeasible (Gruere and Sengupta 2009, 405). Gruere and Sengupta contend that together these two premises have served to disadvantage the growth of GM technology in the developing world.

## 2.7 The Cartagena Protocol on Biosafety

In expressing caution or rejection for genetically modified food aid, Zambia and Malawi both cited the Cartagena Protocol on Biosafety as part of their guidance. This sections explores what the Cartagena Protocol is and its influence on whether a country accepts genetically modified food and technology. According to the Convention on Biological Diversity website, objective of the Cartagena Protocol on Biosafety is to the Convention Biological Diversity is:

> …to contribute to ensuring an adequate level of protection in the field of the safe transfer, handling and use of living modified organisms resulting from modern biotechnology that may have adverse effects on the conservation and sustainable use of biological diversity, taking also into account risks to human health, and specifically focusing on transboundary movements.[8]

The protocol came into effect in May of 2000, with countries coming on over the next decade. The U.S. is not a party to the Cartagena Protocol, but the EU is. Though interviewees from both Zambia and Malawi cited the protocol in influencing their decision, neither country was party to the protocol at the time of the 2002 crisis. However, Zambia joined in 2004 and Malawi joined in 2009

[8] Convention on Biological Diversity, "Text of the Cartagena Protocol on Biosafety," https://bch.cbd.int/protocol/text/ (accessed November 6, 2017)

(Gostek 2016, 780-782).[9]

Gupta and Falkner (2006) discuss how the Cartagena Protocol has influenced the policies and actions of Mexico, China, and South Africa. The authors argue that the protocol has influenced policy in these countries, all of them developing, through three avenues. The first is enhanced choice. The Cartagena Protocol mandates that decisions about whether to import or export GMOs must be made based on scientific risk assessments, but also allows for precautionary decisions to be made before the risks have been fully assessed. In widening the basis under which countries can make decisions as to whether to accept the technology or not, the protocol gives countries more choices (Gupta and Falkner 2006, 29). The second avenue of influence is that of enhanced access to information from GM exporters. Under the protocol, GM exporting countries are required to provide information on what they are exporting to potential importers. This requirement helps with the first influence, that of making the decision on a sound scientific basis (Gupta and Falkner 2006, 30). The final avenue of influence comes in the form of a call in the protocol for capacity building to help countries develop biosafety regulatory frameworks (Gupta and Falkner 2006, 31).

All of this means that while Zambia and Malawi were not yet signatories to the Cartagena Protocol, they could cite it as reasoning for displaying caution in acceptance of the genetically modified food aid being offered and look forward to taking advantage of its capacity building provisions once they were signatories to

[9] Convention on Biological Diversity. “Parties to the Protocol and Signature and Ratification of the Supplementary Protocol,” https://bch.cbd.int/protocol/parties/ (accessed November 6, 2017)

the protocol.

## 2.8 GMOs in the Developing World

The previous sections discussed the debate between the U.S. and EU in regard to GMOs. The issue of genetically modified crops and food and their relative safety has been and continues to be greatly debated. The issue holds special importance for the developing world, where, if genetically modified crops live up to the claims, great strides could be made in countries' ability to feed themselves.[10] On the other hand, if genetically modified crops live up to the claims of their naysayers, the introduction of them in the developing world could also do considerable damage and further exacerbate the hunger problem. This section will discuss some of the literature on the introduction of GMOs to the developing world, examining the implications of acceptance, the factors that lead to acceptance, and the pros and cons of doing so.

In their article, "GMOs and the Developing World: A Precautionary Interpretation of Biotechnology," Lieberman and Gray (2008) explore the implications of developing countries, especially African countries, accepting genetically modified crops, with particular emphasis on genetically modified food aid. They do this using the framework of the precautionary principle, or the idea that until more is known, GMOs should be strictly regulated, if not banned altogether (Lieberman and Gray 2008, 396). The authors contend that both the

[10] This is of course assuming that agricultural technology is the only concern in developing countries' ability to feed their people. Though it is beyond the scope of this dissertation, as was seen briefly in Chapter 1, technology is not the only reason developing countries struggle with feeding their citizens.

U.S. and the EU use the precautionary principle, but apply it differently. The U.S. treats GM foods as though they are equivalent to other grown foods, which means that they fall under the same governing bodies and regulations as conventional farming products. In contrast, the EU has created new legislation to deal specifically with GM technology in both farming and food and in doing so has created a stricter protocol (Lieberman and Gray 2008, 396).

Lieberman and Gray also discuss genetically modified food aid. The authors point out that because GM food has been treated as equivalent to conventional food from its introduction, when it comes to food aid, GM food is also treated no differently (2008, 399). Lieberman and Gray provide a brief history of U.S. food aid before turning to the issue of genetically modified food aid. From the beginning the program has had critics, and the addition of genetically modified food into food aid shipments has only intensified the criticisms.

The major criticism is that the U.S. is using food aid to introduce genetically modified food and crops into the developing world, essentially forcing the technology on unsuspecting countries in need. Organizations like Greenpeace claim that once the food or crops are in the country, the U.S. has created a backdoor wherein USAID's Program for Biosafety Systems can offer assistance and create more dependency on GM food and crops. Critics claim that this helps push countries towards using the U.S. model of treating GM crops as equivalent to conventional crops. (Lieberman and Gray 2008, 401-402).

From the viewpoint of the countries receiving the genetically modified food

aid there are a host of reasons not to accept the food. Many of these reasons will be discussed in greater detail in Chapters 5 and 6, but Lieberman and Gray mention one important reason in their article, and that is the concern that accepting the food and subsequently planting the crops will result in a dependency on the U.S. for not only the seed, but for the proper pesticides to control them (Lieberman and Gray 2008, 405). This would require a dependency on the U.S. that some countries are not comfortable with.

Writing more recently about the genetically modified crop debate in Africa, Mabaya et al. (2015) discuss the factors involved in whether a country is willing to adopt genetically modified crops or not. According to the authors, there are six main factors. The first is ministerial control of biosafety. Mabaya et al. point out that unlike many other issues, the acceptance of genetically modified crop growth is one that many parties take an interest in. This means that often the issue can fall under multiple ministries' responsibilities, including agriculture, trade and commerce, food safety, consumer protection, rural development, science and technology, and environment (2015, 580). The number of ministries involved often means a lengthy approval process and politicization of the issue. The authors point out that in most African countries the oversight of biosafety and biotechnology rests in either the ministry of environment or the ministry of agriculture. However, in Zambia, the oversight falls under six different ministries, making agreement on anything exceedingly difficult. In contrast, Malawi's oversight resides under one ministry in one office, the Commission for Science and Technology (Mabaya et al. 2015, 581).

The second factor discussed by the authors is peer country influence. The authors argue that most African countries look to their neighbors for policy guidance. Acceptance by one country can lead to a domino effect of acceptance by other countries as they try to keep up with their neighbors. One reason for this is the porous borders between many African countries, which necessitates similar policies in order to maintain control (Mabaya et al. 2015, 582).

The third factor is the state of the seed sector. If a country has a well-developed seed sector to produce, market, and disseminate seed, they are more likely to favor having genetically modified crops in their country. In their article, Mabaya et al. analyzed the impact of the seed sector on GM application stage and policy. They found a positive correlation between the two (Mabaya et al. 2015, 583).

The fourth and fifth factors are related to each other and to the first factor. They are advocacy by key political figures, public influence, the media, and activism. Politicians are susceptible to being swayed, and the authors point out that the position of the country may change as politicians change. They specifically point out the example of Zambia where President Mwanawasa declared the crops and food would never be allowed in, but subsequent presidents have softened their rhetoric. The policy has not yet changed, but the presidents are getting progressively closer to acceptance (Mabaya et al. 2015, 585). According to the authors, part of this change may be due to the role of media and activism in Zambia and other countries. However, the authors argue that African media has proven to be particularly unreliable in pushing viewpoints,

with several media outlets swinging between condemnation and approval without apparent reason (Mabaya et al. 2015, 586). Activism is related to these factors because of its use of media and ability to sway politicians.

The sixth and final factor the authors argue is that of food security crises. They point to evidence that the willingness to adopt genetically modified crops is lower during times of relative security and higher during times of crisis (Mabaya et al. 2015, 587). This unfortunately opens African countries to manipulation by outside sources eager to push their product on desperate Africans.

Mabaya et al. (2015) show that many factors go into accepting genetically modified crops and food in Africa, but that the process, while difficult, can be accomplished while successfully protecting the country. The authors urge public education on the subject, scientific studies and findings being discussed in the media, and conferences for political leaders in order to discuss the issues facing them (Mabaya et al. 2015, 589). This is valuable as a way forward for African countries to become fully informed, and to cut down on politicization of the issue.

In their paper written for the Center for Global Development, Elliott and Madan (2016) seek to further elucidate the potentials and pitfalls of GMOs for Africa. One point they make is that GM crops have been less effective than they could be in Africa because the corporations propagating the seed developed it with large-scale farming in mind, rather than the small holdings that most Africans have (Elliott and Madan 2016, 8).

Elliott and Madan argue that there are risks and problems in accepting GM technology. The first is that adopting the technology would threaten African

agricultural exports. The authors use and update the work of past scholars and conclude that, even using very conservative estimates of GMO sensitivity, the chance of African nations losing trade because of the introduction of GM technology is small. This is because, while the EU is a major importer of agriculture from Africa, that market is growing very slowly and is poised to be overtaken by other markets such as China which are much more open to genetically modified food (Elliott and Madan 2016, 12).

Another risk Elliott and Madan discuss is that of capacity. Currently many African nations lack the human resources, infrastructure, economic resources, and technical capacity to fully take advantage of the new technology. This means that governments must carefully weigh their country's capacity to succeed with a new technology that requires an initial outlay of cash and education. One recommendation the authors make is private public partnerships both in and out of country in order to facilitate capacity building for farmers and other stakeholders (Elliott and Madan 2016, 14-16).

Finally, Elliott and Madan give recommendations for making GM technology work for African countries. The recommendations include the aforementioned partnerships, cost-effective regulatory frameworks, information exchange, cooperation between developing countries, and the acquisition of donor funds to help with the transition (Elliott and Madan 2016, 17-18). With this, the authors join other scholars like Paarlberg (2002, 2009) and Anderson and Jackson (2005) who believe that genetic modification can successfully alleviate some of Africa's worst hunger issues.

Genetically modified food, crops, and technology represent an incredibly complex subject for the developing world. First is the relative influences of the U.S. and the EU, and fears about market manipulation to gain advantage for U.S. companies on one hand, and the fear of trade restrictions because of GM crops on the other hand. Adding to the complexity is the Cartagena Protocol, and its rules and regulations signed off on by many of the countries of the world. The difficulty of creating good biosafety regulations and the implications of doing so also add difficulty to countries' decisions. As can be seen by the span of years in the literature, in many ways, the debate has not changed significantly since 2002, and reviewing the debate helps one understand the atmosphere in which Zambia and Malawi made their decision.

## 2.9 Genetic Modification and Food Aid

The debate surrounding GM technology and Africa is not complete without addressing food aid. The subject of this dissertation, the 2002 decisions in Zambia and Malawi, was not the only time Africa faced drought. Because of this, some scholars have addressed the subject of genetically modified food aid as a whole. This section will first examine the literature on genetically modified food aid and specific examples of the treatment of the 2002 decision and discuss how the literature pertains to this dissertation. Much of the literature found pertains only to Zambia's decision, with few addressing Malawi's opposing decision at any length.

In her article, "The Political Economy of Food Aid in an Era of Agricultural

Biotechnology," Clapp studies the rejection of genetically modified food aid by developing countries. She argues that, contrary to the literature from the 1990s that argued that the reform of food aid policies had led to a depoliticization of the food aid regime, the issue of food aid is still debated and that donor motivations in the era of biotechnology must be considered (Clapp 2005, 470).

Food aid shipped from the U.S. has contained genetically modified food since the mid-1990s, including to countries were there were moratoriums on GMOs, such as Bolivia. While there were some protests, until 2002 the situation was mostly such that the food aid was helpful but not critical to the recipient nation. This changed in 2002 when southern Africa faced its worst food shortage in 50 years (Clapp 2005, 471). Clapp then briefly gives part of the history in Zambia, including the defensive reaction of the U.S., discussed further in Chapter 4 of this dissertation, and the criticism of EU policy, discussed more extensively in Chapter 6.

Clapp's article also goes beyond the scope of this dissertation by tracing the history of the motivations for the U.S. giving food aid. The article also discusses the different interpretations of risks and precautions taken because of those interpretations, which will be discussed more in Chapters 4, 5, and 6. Clapp's article is useful for a history, but provides no theoretical framework for what happened or why. In addition, Clapp only very briefly mentions Malawi's decision at all.

In their report on the status of attitudes towards GMOs, Cooke and Downie (2010) focus on three countries—Zambia, Kenya, and South Africa—

because of their varying acceptance of genetically modified crops. The report, written in 2010, indicates that attitudes in Zambia remain very much the same as they were in 2002. The authors briefly go into the history discussed in this dissertation. They argue that there were several factors that compounded the 2002 crisis, among them poor harvests, flooding, drought, economic decline, and the prevalence of HIV/AIDS, which made it difficult for people to support themselves (Cooke and Downie 2010, 5). Cooke and Downie also discuss the debate in Zambia and how quickly it became passionate and emotive, leaving little room for scientific facts. This in turn led to a hardening of positions, and the position of the president became the foundation for the national policy (Cooke and Downie 2010, 6). Cooke and Downie also briefly discuss the role of the United States in the debate, stating the U.S. needs to be cautious in how they advocate for the technology because there is widespread suspicion over their motives for doing so (2010, 3).

One claim Cooke and Downie make is that there was no scientific community in Africa outside of South Africa (2010, 1). This shows a Western bias because, while the scientific community may not be anywhere near as robust as it is in the West, certainly there are and were scientists educated enough to assess the science coming out of the West in regard to GMOs. However, it is true that the scientists, particularly in Zambia and Malawi, were hindered by fear of what genetically modified crops might do if experimented on in-country, a fear that remains today.

Andrew Bowman (2015) also discusses Zambia's decision to reject

genetically modified food aid in 2002. Bowman's article is similar to this dissertation in his use of interviews of key players and media coverage. However, Bowman argues that the decision did not come down to debates over health and environmental risks, but also focuses on issues of sovereignty and risk. Bowman (2015, 1377) claims that the decision was made because the Zambian government was concerned over maintaining control over GM technology, and that the importation of genetically modified food aid threatened that by forcing Zambians to obtain their seed from outside the country. Bowman (2015, 1378) also argues that the crisis highlighted the diminishing state of Zambian science because both the government and the citizens treated Zambian scientists as lay people rather than experts. Both factors combined to push Zambia towards rejection of the genetically modified food aid.

Bowman's article covers much of what is covered in this dissertation. However, this dissertation goes well beyond Bowman by adding a theoretical framework to illuminate the process of the decisions and by examining Malawi's decision and how the two processes lead to different outcomes.

David Fig (2003) also offers an analysis of the Zambian decision, one written very shortly after the crisis. After a history of the decision, Fig focuses on two main issues: the lack of legal framework Zambia had for protecting themselves should GMOs enter their country and the suspect motives of the U.S. in pushing for the food to be accepted. Fig does an excellent job of using the media coverage at the time, as well as reports by various institutions to back up his arguments, but his article suffers from lack of a broader focus on all of the

reasons behind the decision.

Emma Broadbent's article (2012) presents a straightforward case study. Broadbent examines three major areas: the context and development of the debate, the role that evidence played in the debate, and what influenced what evidence was used. Broadbent's article is very useful for history of the decision. Broadbent (2012, 15) does mention one element that I also found, the lack of openness from members of the Zambian government in discussing the decision with researchers.

Pascal Mwale (2006) takes a very interesting approach to studying the decision in Zambia by exploring the form in which public debate about biotechnology took place in Zambia at the time of the decision. Mwale uses his article as an intellectual exercise in exploring the concept of "public debate" as it pertains to public understanding of science. Mwale writes the article in order to examine what public debate is when it comes to science and how it worked in a practical application.

There are also scholars who take a more aggressive approach to assigning blame in the genetically modified food aid debate Bodulovic (2005) blames the EU for exacerbating the problem in Africa with their policies. Bodulovic argues that the lack of support for biotechnology by European nations and the fear of trade loss led to the rejection of the genetically modified food aid. Bodulovic's conviction is strong, but his article fails to consider the many other factors that contributed to Zambia's ultimate rejection of the genetically modified food aid.

Zerbe (2004) is another scholar who takes a very definite viewpoint of the 2002 crisis and how it was resolved. Zerbe argues that the U.S. provided genetically modified food aid not because that is what is primarily grown in the U.S., nor because they had a sincere desire to help, but instead because sending the genetically modified food aid was a way of promoting the adoption of biotech crops in southern Africa, which would in turn expand market access for U.S. corporations and ultimately undermine smallholder production. In this way U.S. corporations who were pushing to expand their own markets played an indirect role in the pressures the U.S. applied. Zerbe (2004) argues that this would ultimately lead to greater food insecurity in Africa. Zerbe's article suffers from an abundance of cynicism in describing U.S. motives as well as a lack of perspective on other reasons for sending the genetically modified food aid, including those mentioned above.

While Zambia's decision has been treated by multiple scholars in many ways, it is more difficult to find treatment of Malawi's decision. William Attwell's article, "'When We Have Nothing We All Eat Grass': Debt, Donor Dependence, and the Food Crisis in Malawi, 2001 to 2003," examines why the food crisis was so severe in Malawi. Attwell (2013) argues that it was the severity of the crisis that led to Malawi's decision but does not examine the decision closely. Instead, Attwell argues that the crisis was brewing long before it ever happened because of poor decision-making by the Malawian government, as well as cancellation of aid stemming from allegations of malfeasance. All of this meant that Malawi was unprepared to take care of itself when the 2002 famine hit. This will be treated

further in Chapters 4 and 6.

## 2.10 Conclusion

This brief literature review has served to examine the scholarship of game theory in International Relations by looking at game theory broadly before narrowing the focus to the specific game theory being used in this dissertation, two-level game theory. It has also discussed the importance of taking domestic politics into consideration even when studying International Relations, and explored some of the literature that does that in the developing world. The next section examined the differences between the U.S. and the EU and how those differences have affected African countries considering adopting GM technology. It has also reviewed the scholarship over whether African countries are right to fear loss of trade with the EU, or whether there might be other markets to pursue with GM crops. The review also discussed the Cartagena Protocol and its influence in Zambia and Malawi's decisions. Next, the review looked at the potentials and pitfalls of using GM technology in Africa and the factors that lead to acceptance of the same. Finally, the literature review focused on scholarly works on genetically modified food aid by examining articles written about the decision in Zambia and Malawi and how they help and are different from this dissertation.

# CHAPTER 3

# METHODOLOGY

## 3.1 Introduction

In any scholarly work it is important to explicate the design of the research, how the research is conducted, how the particular methodology will be used, and why those choices were made in relation to the research question. In this study, I asked, What were the forces and pressures at play in Zambia and Malawi in 2002 that caused them to make different decisions regarding the acceptance of genetically modified food aid? This chapter will first explain the research design of the dissertation, with particular attention to why the methodologies being used were chosen, as well as their advantages and disadvantages. Next, the chapter discusses case studies and how they can best be employed, as well as pitfalls to watch out for when using them. This includes the justification for selecting the cases used in this dissertation. Analysis is an important part of any study, and the ways in which analysis is employed are in the next section. The final sections discuss the sources used in this dissertation, including interviews, newspapers, and other secondary sources.

## 3.2 Research Design

Because this dissertation is studying two decisions, the best methodology to be used is qualitative. Qualitative methodology allows reasons to be pulled from narratives of those involved, leading to insight about what happened and why. The specific methodology is case studies in a structured, focused comparison using the congruence method, as advocated by George and Bennett (2005). In this methodology, the researcher uses a method structured by writing specific questions about the objective of the research. These questions are then answered for each case under consideration. In order to maintain the structure and produce comparable data from each case, the same questions must be asked of each case.

For this dissertation, the same questions were asked in interviews in each country, but also the same questions were asked about each of the other sources, such as newspaper articles. This helps both guide and standardize data collection, making systematic comparisons easier and generalizable findings possible. The method also allows for an orderly, cumulative development of knowledge. The method is referred to as focused because it deals only with certain aspects of the historical record, in this case, the 2002 decision as to whether to accept genetically modified food aid (George and Bennett 2005, 67-70). In order to understand what happened, many of the players in the situation were interviewed, asking them a variety of questions that helped give a clear picture of what their role was, what their actions were, and why they acted the way they did.

The congruence method used in this dissertation is particularly useful in this study for a number of reasons. The congruence method is a methodology which begins with a theory. The theory posits a relationship between the dependent and independent variable. In this study the dependent variable is the decision made by each country and the independent variables are the attitudes of the actors, the individual decisions, and the pressures from both international and domestic entities, including the scientific community, NGOs, and churches. The theory is then assessed for its ability to predict or explain the outcome in the cases under study (George and Bennett 2005, 181). If, after determining that the outcomes of the cases are consistent with the theory's predictions, it may be possible to posit a causal relationship between the variables. Though the terminology used in this study is from George and Bennett, Yin discusses a similar methodology which he terms analytic generalization, wherein, "a previously developed theory is used as a template with which to compare the empirical results of the case study. If two or more cases are shown to support the same theory, replication may be claimed." (Yin 2009, 38)

Rather than strict process tracing, this methodology includes what George and Bennett (2005, 151) call controlled comparison, that is, a nonstatistical comparison of a small number of cases meant to document and analyze instances of a phenomenon that are similar, ideally, in every way but one, in this case the opposite decisions made in the countries. Zambia and Malawi faced the same famine in 2002 and were faced with the same decision, but made opposite decisions. This study thus qualifies as a controlled comparison.

There are several advantages to this methodology according to George and Bennett (2005) and Yin (2009). The first is that the burden on the investigator to trace the causal process that leads from the independent variables to the final outcomes is lessened. This means that the method requires less data about the cases under investigation in order to be valuable. This is especially useful in Africa where data can be difficult to obtain for many reasons. In interviewing, in some cases, the people in charge are no longer available, whether because they cannot be easily traced, or in some instances with countries where HIV/AIDS is so prevalent, the potential interviewees have died. Gaining access to documentation is also a problem. For example, in Zambia any minutes from meetings held by parliamentary members, standing committees, or ministry committees about the decision were placed in the National Archives and cannot be accessed for 30 years. In Malawi, according to multiple interviews, minutes were simply not taken. This means a reliance on secondary sources such as newspaper articles, which detailed what was happening in the countries at the time, as well as the decision-making processes. Though other sources might have been found given plenty of time and money, the reality of writing a dissertation made that impossible.

Because of all of these data difficulties, process tracing using an exact timeline is simply not possible, making the congruence methodology the most likely to yield useful results. According to George and Bennett, the explanation in the cases, “may be deliberately selective, focusing on what are thought to be particularly important part of an adequate or parsimonious explanation. Or the

partial character of the explanation may reflect the investigator's inability to specify or theoretically ground all steps in a hypothesized process, or to find data to document every step" (2005, 211).

Difficulties in gathering information point to other advantages of the congruence method. This method allows for considerable flexibility and adaptability. It can be used in a variety of ways, including helping to refine non-predictive or explanatory theories so they can be tested. It can also be used as a within-case method or as a controlled comparison (George and Bennett 2005, 183).

I chose this particular methodology for a number of reasons. The research design is comparative in nature, comparing two countries that are similar and examining a particular situation the two countries had in common where the outcomes were different. This dissertation is very loosely employing John Stuart Mill's Method of Difference (also known as a most-similar case design) (George and Bennett 2005, 153-154). While the cases under study are similar enough for a comparison, the similarities do not quite rise to the level required by John Stuart Mill's Method of Difference. As noted by George and Bennett (2005, 153), Mill's method requires a strict set of circumstances, namely that the cases are similar in all aspects but one. Zambia and Malawi's history, population, and geography are similar but preclude strict use Mill's methodology because while they are similar in terms of history, population, and geography, they are two countries with histories that have diverged. At the beginning of the famine, as has been shown, they were not in the same position financially or with

respect to donors and are therefore not similar enough to qualify for Mill's Method of Difference. In addition, there was more media and international focus on Zambia because of the controversy surrounding its decision. Taken alone, this could mean that the controlled comparison is weakened. However, interviews were more readily available in Malawi and I was able to obtain more information from them. This helps to balance the media focus on Zambia, which provides more information for that country.

Zambia and Malawi made different decisions. This dissertation is an attempt to lay out the crisis situation as it happened and explain why the two countries diverged in their decision as to whether to accept or reject genetically modified food aid from the U.S. through the WFP.

## 3.3 Case Studies

There are many definitions of a case study, but in essence case studies allow a researcher to inquire in depth into a particular event, decision, or circumstance. According to Yin (2009, 18), a case study is an empirical inquiry that: "investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident." George and Bennett (2005, 5) define case studies as a "detailed examination of an aspect of a historical episode to develop or test historical explanations that may be generalizable to other events." Schramm (1971, in Yin 2009, 15) defines case studies as: "The essence of a case study, the central tendency among all types of case study, is that it tries to illuminate a

decision or set of decisions: why they were taken, how they were implemented, and with what result." Qualitative case studies are useful as complements and counterpoints to quantitative work because they give the researcher the chance to ask fundamental questions not just about what occurred, but why a phenomenon occurred, what led up to it, and what happened because of it. Gerring (2007, 1) argues that one can gain a better understanding of the whole by focusing on a critical part. This in-depth knowledge of an individual case can then be more useful than a shallow knowledge of many cases.

Some case studies are histories of particular events, studied in order to illustrate a larger principle. The case studies in this research are not histories because many of the key players are still alive and available to speak to. However, the modernity of the cases do not rise to the level of experiments because the behaviors and decisions are in the past and thus cannot be manipulated (Yin 2009, 11).

### 3.3.1 Problems with Case Studies

While case studies have many advantages, there are also disadvantages to using them. The first objection often raised is procedural in that there is a lack of rigor in doing the case study and very little planning involved. This is patently false and easily overcome by any researcher with a sense of academic responsibility. The second issue is that case studies are not widely generalizable; while they may be generalizable to theoretical propositions, generalizing them to populations or universes is problematic because there is

little basis for comparison. The goal of case studies tends to be expanding theoretical propositions rather than enumerating frequencies. Another issue with case studies is that they take too long and result in massive, unreadable documents (Yin 2009, 14-15).

There are ways to combat the disadvantages of case studies. The first is to focus on the quality of the research design. According to Yin (2009, 40-45), there are four areas that must be considered in order to have a solid research design, and thus lead to good case studies. The first is construct validity, or the process of identifying correct operational measures for the concepts being studied (See also King, Keohane, and Verba 1994, 25). In these case studies the operational measure of the dependent variable is a simple one: the decision to accept or reject food aid provided by the U.S. Yin suggests ways to ensure good construct validity, including using multiple sources of evidence as a way of triangulating the evidence and establishing a chain of evidence between the process and the outcome.

The next critical area is that of internal validity. Brady and Collier (2004, 292) define internal validity as "the degree to which descriptive or causal inferences from a given set of cases are correct for those cases." Yin (2009, 40-45) argues that internal validity must answer the questions of whether there are other explanations for x causing y. Internal validity also seeks to show how the explanation can be proven, and whether the explanation is airtight. Because of the difficulty of gathering evidence, it will be difficult to determine with any degree of certainty whether the explanation given in this dissertation is the only one.

However, Yin has recommendations such as using pattern matching, doing explanation building, and addressing rival explanations. To this end, pattern matching will be done by using game theory, showing the predicted, theoretical pattern of action and comparing that to the actual observed pattern (See Yin 2009, 136-139).

External validity is the third area Yin (2009) believes is critical to have a high quality research design. Brady and Collier (2004, 288) define external validity as, "the degree to which descriptive or causal inferences for a given set of cases can be generalized to other cases." Yin (2009, 43-44) explains that in analytical generalization the scholar is trying to generalize results from a study to a broader theory. This can be done in part by replicating the findings in different cases. Yin recommends using replication logic in multiple case studies in order to make external validity more likely.

The final area Yin recommends for a good research design is reliability. Reliability refers to having a structure, design, and plan such that a future researcher could do the same study and come to the same findings and results (Yin 2009, 45). King, Keohane, and Verba (1994, 25) also emphasize the importance of reliability, stating that the same procedure needs to be applied in the same way in order to produce the same measures. Yin (2009,41) suggests that there are two ways to ensure reliability. The first is to use a case study protocol to encourage uniformity. For this dissertation, case study protocol was observed in the main source of evidence by establishing a set of questions to be asked of each interviewee, including the pre-interview requests to ensure that

they understood what was wanted before agreeing to the interview. In addition, interviews were transcribed and described as close to the event as possible, and thematic coding was done multiple times. I did this in order to firmly establish the method of coding and also to make sure I was able to draw out and group all of the themes that arose in the interviews so that they could be used to tell the story.

George and Bennett (2005, 69) also list ways of overcoming objections to using case studies. The first is to clearly identify the universe of the cases or instances. In the case of this dissertation, the universe is the four Sub-Saharan African countries that were faced with drought in 2002 and thus I had the decision to make. Of those four, two have been chosen to study in depth. The second method to overcome objections is to have a well-defined research objective and an appropriate research strategy. The final method is to employ variables of theoretical interest for purposes of explanation.

### 3.3.2 Case Selection Justification

Case studies are a key component when trying to explore why a decision was made but the cases in the study must be chosen carefully. According to Yin (2009, 54): "Each case must be carefully selected so that it either (a) predicts similar results (a literal replication) or (b) predicts contrasting results but for anticipatable reasons (a theoretical replication)." Since the two countries in question arrived at two different decisions, this study must fall under Yin's second type, that of theoretical replication. It is the purpose of this dissertation to explore

the reasons for the opposite decisions. Cases in a case study must also be similar enough to effectively compare. Gerring (2007, 50) states that: "Cases must be similar to each other in whatever respects might affect the causal relationship that the writer is investigating, or such differences must be controlled for. Uncontrolled heterogeneity means that cases are 'apples and oranges'; one cannot learn anything about underlying causal processes by comparing their histories." Zambia and Malawi were chosen because their histories as British colonies who gained independence close to each other establish a shared history and brought about a similar governmental structure, because they have tribal histories close enough they that they share a common native language, because they are both among the poorest countries in the world, and because they share much the same geography and amount of arable land.

One concern that can arise from a limited number of cases is selection bias, or selecting on the dependent variable. Because this study was limited by time and money, the question arose of which countries to study. As has been previously mentioned, four countries, Malawi, Mozambique, Zambia, and Zimbabwe faced the same decision as to whether to accept or reject genetically modified food aid and thus constitute the full population of cases in 2002. According to King, Keohane, and Verba (1994, 128), random selection of cases is not generally appropriate in qualitative, small-n research. This meant choosing the countries to study. Access was an issue, and because of that I narrowed the selection of countries to two rather than all four. Because they made different decisions, my selection of Zambia and Malawi allowed "for the possibility of at

least some variation on the dependent variable," which King, Keohane, and Verba (1994, 129) point out is critical to furthering understanding in small-n case studies.

Only studying two cases was necessary, but it does present some limitations. The main concern is that selection on the dependent variable reduces what one can say about the causal effects in the cases (King, Keohane, and Verba 1994, 132). This also means that it is difficult to infer to the other two cases in the population. However, this gives a call to further research in future studies. Despite the potential drawbacks, by selecting cases with variation on the dependent variable, the study is still strong.

## 3.4 Analysis

There are many recommendations for how to make the quality of analysis better in case studies. Yin (2009, 160-161) in particular has several important components to good analysis. First, analysis should show the author used all of the evidence rather than ignoring what did not fit with the picture. Second, the analysis should address, as far as is possible, all rival explanations for what happened. Third, analysis should address the most significant aspects of the case study, and fourth the analysis should reflect the prior, expert knowledge in the case studies. All of these elements together, in addition to being wary of the aforementioned problems with case studies, produce a high quality analysis.

Because one of the methods of data generation used in this dissertation is interviewing, I use reflexivity to analyze how my embodied identity may have

affected the data. Reflexivity, as defined by Lee Ann Fuji is “a critical, ongoing examination of the way the researcher engages with others—be they participants, research assistants, interpreters, or other interlocutors. Reflexivity involves careful consideration of how issues of positionality, such as the researcher’s personal characteristics or theoretical vantage points—shape the research process. Such issues bear on the kinds of knowledge claims the researcher can advance.” (2017, 13-14) I, a Caucasian, American female, conducted all of the interviews. Almost all of the interviews were done face to face and were conducted with native Zambians and Malawians. This necessitates asking questions like, what were the unseen power dynamics in the interviews? Were answers constrained because of the position of the interviewer and interviewee? Did the power dynamics change with the position of the person, i.e., were those who felt they had no responsibility in the decision willing to be more candid, or was that true of those who felt they had fought for what was right? Or was there no power dynamic because those being interviewed were the elites of the nation, thereby correcting any potential power imbalance there might have been? (see Fuji 2017, 165)

It is difficult to determine the power dynamics when you are the one in the middle of the situation, but on the whole there were enough factors for and against me that I believe there was often a balance of power in the interviews. First, the power dynamics might have been different had most of my interviewees known I was coming. The process of getting the interviews, where most were obtained by simply walking into their offices, was so informal that I believe it

diminished what might have been a power imbalance (a White, American, Researcher) in my favor. I was not coming to them through formal channels, and while I always presented my credentials, by not being referred by anyone, I believe I was not viewed as intimidating as I might have been. I see this in several ways. The first is the willingness of the interviewees to talk to me at all. The second way is reflected in the transcripts, where one can see that many of the interviews involved quite a bit of laughter. I did not transcribe whole chunks of time when the conversation veered into pleasantries and personal talk and was so far from the given subject as to be irrelevant. This was of course not true of all of the interviews. Some, like Duncan Ndhlovu, an aid worker in Malawi who asked that his agency not be named because he had permission from his boss to speak to me but not official agency approval, was clearly nervous, shifting a lot and hesitating in his answers. This interview was also one of the few where I actively felt that the answers were constrained.

On the other hand, it was odd that so many people agreed to speak to a stranger who showed up in their office with only a piece of paper to verify she was who she said she was. This indicates that perhaps my power was greater than I perceived. This also could be attributed to my speaking to elites who knew their subject. However, knowing the subject did not always mean they were willing to talk about it. I was able to do almost twice as many interviews in Malawi as in Zambia. At the outset I assumed that the Zambian interviews would be much easier to obtain because I have so many contacts from the work I do in-country. The opposite turned out to be true. The ministries who had been so

willing to talk to me in Malawi were completely unwilling to speak to me in Zambia. Also, it was difficult to get interviewees to recommend anyone else to talk to. But the biggest difference in Zambia was that of feeling. It seemed to me that interviewees were either reluctant to discuss the situation or were defensive about the decision. Indeed, Robert Sichinga, the former Member of Parliament, Minister of Commerce, and Minister of Agriculture whom I had a previous acquaintance with, became upset with me several times in the interview when I presented “facts” as I had read them or been told them. This unwillingness to speak, sometimes a lack of friendliness, and defensiveness are contrary to all of my previous interactions in Zambia, where I have worked extensively.

I can only speculate why there were such stark differences between the two countries. The most obvious reason is that by not accepting the genetically modified food aid, the Zambian government made the de facto decision to possibly let their people starve. Their inaction meant people would suffer. This is not a decision for anyone to be proud of. In addition, they were harshly criticized for the decision they made. I worked very hard to keep any judgment out of my prewritten questions, out of my follow up questions, and out of my tone, but I cannot guarantee that some judgment did not slip through.

Ultimately, I believe I was able to get the truth from my interviewees and that power dynamics did not prevent this. I was limited by people not being willing to talk to me and by not having enough time in each country to track down everyone I wanted to speak to. This was much truer in Zambia, where I felt it would have taken another six months to convince everyone to speak to me. In

contrast, by the time I left Malawi I had spoken with everyone who had been recommended to me, and they were actually starting to recommend each other. This is not to say there were not more people, but I feel I had a better foundation of interviews in Malawi.

It is not just the relative positions of the interview and interviewee that must be considered. Context is important. At the time of the interviews, there was a distinct possibility that Zambia and Malawi were both headed back into the same situation that had occurred in 2002, with a lack of precipitation in the previous few years causing great concern about drought and famine. It is important to ask, did that situation affect the views of those interviewed? Ultimately, I do not believe this played a part in their answers. When asked, most interviewees were aware that there might be a future problem, but were optimistic that they could handle it with the systems they had in place.

## 3.5 Data Sources

As previously mentioned, sources of data were a matter of great concern when gathering data. Each source had advantages and disadvantages, but all were chosen with care. The primary sources of data for this dissertation are in-country newspaper articles from the time of the decision, interviews I conducted, primarily during the months of July and August of 2016 in the countries of Zambia and Malawi, and secondary sources.

While in-country, I made every effort made to locate and obtain official documents about the decisions taken in each country. Each time I interviewed

anyone I asked for supporting documentation, but was unable to obtain any official documentation. In Zambia, I was told by a Political Science professor with extensive ties to the government that any official documentation such as meeting minutes or committee decisions would already be archived, and that the national archives then put a 30-year hold on any researchers accessing the documentation, thus making obtaining any official documents impossible for another 16 years. In Malawi, though there did not appear to be a similar hold on national archive records, when I inquired at the National Archives and asked other interviewees, I was told that I was not allowed access to the archives at all. The lack of access to official documents meant that I was forced to rely on newspaper articles of the time, interviews, and secondary sources.

### 3.5.1 Newspaper Articles

For the purposes of these two case studies, I examined newspaper articles about genetically modified food aid in Zambia and Malawi from January 2001 to May 2003. I widened the date span in order to try to capture as much of the debate as I could. Not all of the articles are from either Zambia or Malawi, though all are from Africa. The articles examined totaled 50, with the large majority being from and about Zambia. The articles are all in English and in both Zambia and Malawi some of the articles from the major newspapers in the countries and some are from lesser known newspapers.

Newspaper articles are used for many reasons. The first is that there is great advantage in being able to get an almost day-by-day breakdown of what

was happening in the countries with the famine and the offer and acceptance or rejection of the genetically modified food aid. The second reason is that newspaper articles at the time give access to direct quotes from government officials that were unavailable to interview. These quotes help show what the government wanted the people to know or believe about the issue, as when the statement of President Levy Mwanawasa of Zambia that he would rather die than eat genetically modified food was widely disseminated. Newspaper articles also do an excellent job of indicating something about public opinion, i.e., where people disagreed, and who the major players were. In addition, newspapers give an inside glimpse of the thinking by entities outside the government, thus creating a better picture of what the people were thinking. Through a thorough reading of the newspaper articles, especially those in Zambia because of the larger number of articles written about the situation there, it was clear to see which newspapers were for and which were against the idea of accepting the food. The Post published many articles on the subject, with most of them being either neutral or in favor. In contrast, the Times of Zambia published multiple articles and editorials strongly opposing genetically modified food aid. Representing both viewpoints makes telling the complete story easier.

There is a major issue with the newspaper articles, and that is that there are far fewer articles written about Malawi. This is because their decision was not as controversial and thus did not draw as much attention. However, many of the newspaper articles are referring to the 2002 crisis as a whole and thus give information about Malawi as much as they do Zambia. There is still plenty of

evidence about what happened in Malawi, in terms of newspaper articles, but it lags behind the number of articles written about the situation in Zambia.

### 3.5.2 Interviews

Interviews were used because though this study is one of modern history, I was unable to observe the events directly, and thus had to rely on others' versions of what happened and when. Though I was unable to speak to everyone involved, all of the interviews total over 80 single-spaced pages of transcription. In addition, I interviewed as many key players as possible, adding quality where quantity was sometimes difficult to achieve. In addition to the difficulties of getting the interviews as well as the potential power dynamics at play, there was one more drawback with interviews: I was asking my interviewees to recall events that happened over a decade prior to the interview. This must be taken into account especially because GM technology is still such an issue in both countries, meaning the interviewees' recollections could be colored by what has happened with the issue in the subsequent years. This is why other sources are used. All of the interviews were conducted in English. Though it was not necessarily the interviewees' native language, speaking English and understanding each other was only a problem with one person, Beatrice Chola in Zambia. Although Mrs. Chola speaks English, the majority of her time is spent working with people who are more likely to speak their tribal language than English. All of the interviewees gave me verbal permission to use their names and the recordings of our interviews.

Most of the interviews were obtained by simply showing up at the appropriate government or organizational office and simply asking until someone agreed to speak with me, or by emailing or calling with no prior introduction. I was genuinely surprised by how effective these methods were. The interviews were conducted wherever was most convenient for the interviewee. This included their offices, a hotel restaurant very early in the morning, and in one instance in each country, even my residence. The average length of each interview was 30 minutes, the longest was an hour and the shortest was less than 10 minutes. All but three of the interviews were done face to face, with the other three on the phone. The interviews were semiformal and the general questions were preapproved by the University of Utah Institutional Review Board and were largely the same for each interview. Different follow up questions were asked in each interview in order to pursue different subjects the interviewee had brought up. Two other similarities occurred in every interview: the interviewee was asked for and gave permission to record and use what they said, and each interviewee was asked for supporting documentation. All interviewees but one gave permission for their words and names to be recorded and used, with one other requesting that his specific organization not be mentioned. For the interviewee who would not give permission to be recorded or quoted, I had to obtain information he had elsewhere. Fortunately, that interviewee was willing to be of help in setting up other interviews for me, so he was still of help.

Interviewees were selected based on their position and proximity to the decision-making process at the time of the 2002 decision to accept or reject

genetically modified food aid. I sought out people with particular backgrounds in four areas: scientific view, the government view, the international view, and the civil society view. I was given permission by each individual to be named in the dissertation.

Zambian interviews were much harder to obtain than Malawian interviews. I can only speculate that this was in part because of the decision that was made. Indeed, there was often a distinct defensiveness or almost combative attitude when interviewing or trying to obtain interviews. There are of course other reasons for this, including differences between the countries, but the different attitudes were noticeable. I was often successful in obtaining interviews in Zambia because of personal contacts garnered through my work there. Despite the personal contacts, fewer interviews were done in Zambia, but the ones done were still critical.

On the scientific side, two major interviews were conducted. The first was with Richard Chanda, currently the Principal Research Officer of the Seed Control Certification Institute (SCCI), the government entity in charge of checking for genetically modified seeds entering the country. In 2002 he was the seeds officer for SCCI and thus was involved in the research regarding the decision.

Doris Musonda is the CEO of the National Biosafety Authority, the organization involved in the legalities of letting in the food and who worked to set up the legal framework for genetically modified food importation, growth, and testing. She spoke at length of the fears the country was experiencing in regard to their lack of protective biotechnology legislation, and thus was able to give me

an excellent overview of the situation and how it was eventually resolved.

On the government side, Yande Mwape, a Program Officer for Disaster Management Affairs in the Office of the Vice President was able to speak to the government's alternatives and responses in the wake of the rejection of the food aid. Her interview was quite short, but valuable because of the insight it gave me into how the government reacted in the time of crisis.

Robert Sichinga was a member of the Zambian parliament in 2002 who in his political career subsequently served as the Minister of Agriculture and then the Minister of Commerce, and was in a unique position to talk about how the decision was made, why, and what the international pressures were. Mr. Sichinga was my longest interview. As a member of the governing party at the time, Mr. Sichinga was in full agreement with all of the actions of the government and was able to speak at length about the reasons for their actions and decisions. He had a very specific point of view and wanted to make sure I understood it. Mr. Sichinga is the only interviewee who became upset with me when I questioned what he said, though this could be in part because we already knew each other and he was comfortable doing so.

For civil society, I was able to talk to both a local NGO as well as an international one. Mrs. Beatrice Chola is the founder and Executive Director of Bwafano Community Services in the slum of Chazanga in Lusaka. Bwafwano runs schools, feeding programs, and home care programs. In 2002 Bwafwano was a major recipient of U.S. food aid and was hard hit by the decision to prevent all food aid from entering the country and being distributed. Mrs. Chola was a

major player in protesting to different entities and thus gave an inside story of how one organization appealed to larger organizations, including the WFP.

John Deloko, head of the Zambian Save the Children office, was briefly interviewed as well. He appeared reluctant to speak to me and would not answer many questions, but his interview is still useful because it confirmed the position of a large international NGO.

In Malawi, these key players included scientists like Dr. Kingdom Kwapata. Dr. Kwapata, who at the time was a scientist but was also the head of an NGO called the Human Rights Network, which strongly lobbied the government to accept the food aid, was able to speak about civil society efforts to sway governmental and public opinion on the issue of GMOs. In addition, Dr. Kwapata is now one of the leading scientists in the country on the subject of biotechnology, making him qualified to discuss the efforts of the scientific community at the time.

Professor James Bokosi, a scientist, was also interviewed. Professor Bokosi was a member of the team sent to Mozambique and other countries to help make the decision, specifically on the feasibility and wisdom of milling the food aid before letting it enter the country. Professor Bokosi was also in favor of letting the food into the country. However, Professor Bokosi's interview was conducted on the phone and thus I was not able to record it or transcribe it directly, though I was typing while he was talking. The brevity of the interview is a weakness because Dr. Bokosi could have given me more information about his involvement and the process had we had a longer, face to face interview.

Dr. Wilkson Makumba, the current head of the Chitedze National Research Station who at the time of the 2002 decision was the National Research Coordinator for the Department of Agriculture, was less in favor of letting the food in. His interview was useful again because he was a scientist at the time and could again speak to what the scientific opinion was, but he was also a member of the government and so is knowledgeable about the process of the decision-making

In addition to scientists, multiple members of the government were interviewed. Scholastica Chidyaonga and Madalitso Mwale are the Head and Assistant Head of the Department of Disaster Management Affairs, the department responsible for distribution of food aid in times of crisis. Though neither person was at the department in 2002, both were able to speak to the history of the famine and the decision, how it was made, and which committees were consulted, as well as current attitudes towards genetically modified crops.

Dr. Yanira Ntupanyama is a scientist who is now the Chief Director for Environment and Climate Change Management at the Ministry of Natural Resources, Energy and Mining. At the time of the decision Dr. Ntupanyama was the Principal Environmental Officer for the ministry. Her position both then and now give her unique authority in two areas: government and science. As a scientist she was able to relate what the available science was, and what was believed about it. As a government official, she was able to speak to the process of the decision, who was consulted, and what the factors in the government's decision were.

Civil society and international pressure were also important to consider. In addition to Kingdom Kapwata, Tamani Mvula Nkhono was interviewed. Mr. Nkhono is the National Director of the Civil Society Agriculture Network (CISANET). He was critical in getting the viewpoint of farmers as a whole because his organization is an advocacy organization for them. Mr. Nkhono also showed an excellent understanding of the situation as a whole and was able to speak at length to the history of the situation in Malawi. Because of his position in agricultural civil society, Mr. Nkhono was also knowledgeable about what happened when Malawi sold off their grain reserve but did not then build it back up before the famine hit, as will be discussed in Chapter 4.

The international component, including those institutions on Level I such as USAID, the WFP, etc., was difficult to obtain through interview, largely because of lack of access and organizational rules for speaking publicly of actions and decisions. Nevertheless, I was able to meet with Duncan Ndhlovu, an aid worker for an international organization that was key in distributing food and urging the governments to accept the food aid.[11] Mr. Ndhlovu gave information about what his organization was doing, as well as their policies. This gave me excellent background on the international side, though the restriction on naming his organization specifically makes using Mr. Ndhlovu's words more difficult.

Other interviews in Malawi included a journalist, Ephraim Nyondo, who

[11] Because he did not have official approval to speak with me, Mr. Ndhlovu requested that his organization not be specifically named. However, he then mentioned the name of his organization in the interview, knowing that he was being recorded and would be quoted.

was the primary writer about the 2002 decision for *The Nation*, one of Malawi's major daily newspapers. Mr. Nyondo's interview was on the phone, was difficult to hear, and could not be recorded, so while he gave a general idea of the situation, he will not be quoted. Katherine Chiweza and Boniface Mkoko both work for National Biosafety Commission of Science and Technology and gave background information or were not directly involved in the situation and so are also not going to be quoted. A table of the interviewees, their positions, area of expertise, and the quality of the interview is shown below.

In total, I was able to obtain seventeen interviews, six in Zambia and eleven in Malawi. Table 2 is a list of the interviewees, their titles, and the area of expertise. It is a small number, but, as can be seen above, I was able to speak to people who were very much in a position to know what was happening. Those interviewed were selected based on their proximity to the decision-making process, or for their expertise in the field. Not all key players were interviewed because not all were available. Indeed, though it is somewhat macabre, there was some trouble interviewing some of the key players because, in countries with a lower life expectancy, many of them had died.

With more time and money I might have been able to speak to more people, but I made a conscious effort to interview people from a diversity of areas so that I would have enough information to be able to credibly tell the story. I feel I was able to do this, especially as the interviews were not my only source of information. I had more interviews in Malawi and so was able to obtain more information from interviews that way, which was fortunate because there were

Table 2 List of Interviewees

| Interviewee Name | Title | Area of Expertise | Quality |
|---|---|---|---|
| Zambia | | | |
| Dr. Richard Chanda | Principal Research Officer, Seed Control Certification Institute | Science | High |
| Beatrice Chola | Founder and CEO, Bwafwano Community Services | Civil Society | High |
| John Deloko | Head of Office, Save the Children Zambia | Civil Society/International | Low |
| Dr. Doris Musonda | CEO, National Biosafety Authority | Science/Government | High |
| Yande Mwape | Program Officer in Disaster Management Affairs, Office of the Vice President | Government | Medium |
| Robert Sichinga | Former MP, Minister of Agriculture, Minister of Commerce | Government/International | High |
| Malawi | | | |
| Dr. James Bokosi | Lecturer at Bunda College, formerly with the Ministry of Agriculture | Science/Government | Medium |
| Scholastica Chidyaonga | Director of Disaster Response and Recovery, Department of Disaster Management Affairs | Government | Medium |
| Katherine Chiweza | Communications Officer, Biosafety Commission for Science and Technology | Science/Government | Low |
| Dr. Kingdom Kwapata | Lecturer and Researcher in Biotechnoplogy, Bunda College, Formerly CEO of Malawi Human Rights Network | Civil Society/Science | High |

Table 2 Continued

| Interviewee Name | Title | Area of Expertise | Quality |
|---|---|---|---|
| Dr. Wilkson Makumba | Director of Agricultural Research, Chitedze National Research Station, formerly National Research Coordinator, Ministry of Agriculture | Science/Government | High |
| Boniface Mkoko | Director of Public Biosafety Systems, National Commission of Science and Technology | Science/Government | Low |
| Madalitso Mwale | Assistant Director, Disaster Response and Recovery, Department of Disaster Management Affairs | Government | High |
| Duncan Ndhlovu | Aid Worker, International Organization | International | High |
| Tamani Mvula Nkhono | National Director of CISANET | Civil Society | High |
| Dr. Yanira Ntupanyama | Chief Director for Environment and Climate Change Management, Ministry of Natural Resources, Energy and Mining, formerly Principal Environmental Officer, same ministry | Science/Government | High |
| Ephraim Nyondo | GM Journalist, The Nation newspaper | Civil Society | Medium |

fewer newspaper articles about the situation in Malawi. The larger number of interviews in Malawi helped balance the amount of information I had from Zambia, but even with them there is still more information from Zambia. However, without them, a controlled comparison would be impossible.

### 3.5.3 Other Secondary Sources

This dissertation also uses two other kinds of secondary sources. The first, observation of context for the interviews, including dynamics, has already been mentioned. The other secondary source is journal articles and other reports from institutions that discuss the situation. The journal articles help provide a larger picture of the crisis, and help situate the dissertation in the literature. The reports include in-depth reports from the WFP detailing the situation on the ground in Zambia and Malawi in 2001 and 2002, as well as reports from organizations like Greenpeace about the situations in both countries. The Greenpeace report is about the larger thinking on genetically modified food aid. These reports date from the time of the crisis and thus add excellent context to what was happening, without the benefit or harm of distance from the situation. They will be used as evidence of the thinking and actions of outside entities.

As with the newspaper articles, there are more journal articles about Zambia's decision than Malawi's decision. The reports are distributed equally as I have one from the WFP for each country and the Greenpeace report is about the situation as whole. While there is more information from Zambia, there is not

so much more information that the cases become unbalanced. Table 3 shows the balance of evidence.

## 3.6 Conclusion

This chapter has reviewed the methodology being used in this dissertation. First, the research design and the justification for the choices made was explained. The methodology, using controlled comparison of a small number of cases, is critical to understanding the choices made in the rest of the dissertation. Case studies are being used because they allow for a much more in-depth look at what happened and why particular choices were made. Analysis is critical to this dissertation, because it helps the reader to understand the different motivations and actions of individuals and governments. It is also important to reflect on the intangible aspects such as context and power dynamics that go into field research.

Reliable sources of data are also very important and were difficult to obtain. Official documentation from Zambia and Malawi proved elusive, and so other sources such as newspaper articles and interviews are relied upon. However, one must also take into account the drawbacks of interviews about a

Table 3 Balance of Evidence

| Case | Interview Number | Interview Quality | Newspaper Articles | Newspaper Article Quality | Reports |
|---|---|---|---|---|---|
| Zambia | 6 | Medium | Many | High | 2 |
| Malawi | 11 | High | Fewer | High | 2 |

subject that occurred over a decade prior, and to counter that, newspaper articles from the time became a critical component. The interviews may have gaps, but that is part of the purpose for using the newspaper articles as well. Together they help paint a more complete picture of how and why Zambia decided to reject genetically modified food aid but Malawi decided to accept it.

Multiple sources of evidence are important in any study, but especially in this dissertation. Multiple sources of evidence can help improve the quality of the data gathered, if done so carefully. As King, Keohane, and Verba advocate, the investigator must "collect data in as many of its observable implications as possible. This means collecting data in as many diverse contexts as possible. Each additional implication of our theory which we observe provides another context in which to evaluate its veracity." (1994, 24) I am confident that by using a variety of sources I have done that in this dissertation.

# CHAPTER 4

# LEVEL I: INTERNATIONAL PRESSURE

## 4.1 Introduction

There are many ways for the international community to exert pressure on countries to change policy decisions. The reasons behind successful pressure are debated, and as yet there is no consensus on a formula for successful international pressure (see Caraway 2004; Carter 2016; Dunning 2004; Emmanuel 2013; Fikru 2016; Finnemore and Sikkink 1998; Hawkins 1997; Kilby 2009; Poteet 2003; and Scholl 2009). Some of the more common ways practiced have been through aid conditionality, the formation and enforcement of norms and the attendant pressures, and the enforcement of international law. Each method has its successes and failures and are discussed in this chapter.

This chapter first discusses how the pressure from the international level, Level I, should function as a factor in two-level game theory. There are different forms of international pressure and the chapter provides explanations for these forms along with specific examples of how pressure has been applied in different scenarios and how it works or does not work as an agent of change. The chapter then turns to the cases of Zambia and Malawi and how international pressure was a factor in their decision-making processes. The chapter ends with

a discussion of how well the cases of Zambia and Malawi fit the theoretical framework of two-level games.

### 4.2 How International Pressure Functions Within Two-level Games

International pressure is hypothesized as the Level I factor in the decision-making of Zambia and Malawi. Two-level game theory does not specify whether the international level has to have an effect on how the game is played, just that it is taken into account by the players. On the international level, or Putnam's Level I, in stage one, statesmen begin negotiations with international entities such as international institutions or other countries. In stage two the statesman returns to his own country with a tentative agreement. In this stage, statesmen begin to negotiate an agreement that will satisfy international players without angering their domestic constituents. Also in this stage, both players begin to form, define, and solidify their win-sets, or the universe of conditions they will accept in bargaining. There may be many stages or iterations of this process.

The international entities on Level I also begin to form an idea of what the domestic situation is that will allow the decision to be made, what the pressures are, and what the ratification process will look like. Level I negotiators may or may not have an accurate picture of the domestic situation, but from this they can begin to see the size and shape of the win-set for each country. If there is strong resistance in the country to what the Level I negotiator is offering, or if the ratification process will be difficult, then the domestic or Level II win-set will be smaller. If there is wide support in the country or the ratification process is

informal and does not involve many people, the domestic win-set will be bigger. In the cases of Zambia and Malawi, the decision was made on a high level and made unilaterally, without the consent of the people, which should have made their win-set very big because the high government officials could accept a deal they wanted without consulting their people. However, without a formal and strict ratification process in place, both countries were able to set terms and thus restrict their win-sets.

Level I international pressure had the possibility of widening win-sets because both countries needed to be concerned with their present and future relations with the international community. For Zambia and Malawi, there were two major players' reactions they had to be concerned with: the U.S. and the EU, with other minor players exerting pressure as well. Each entity should have had a vested interest in whether the food was accepted or not. As will be seen, however, there were varying levels of interest and action taken by the U.S. and the EU.

The U.S. attempted to exert enough pressure that they were in danger of what Putnam calls reverberation (1988, 454). Reverberation happens when players on Level I attempt to influence the negotiations by exerting pressure on Level II. These attempts can be successful and may change the course of the negotiations and the size of the win-set or they may cause a backlash that makes the other players entrench themselves in their own position. As will be seen, this was the case in Zambia, where attempts at pressuring government officials led them to further question why the U.S. was so insistent on Zambia accepting the

genetically modified food aid. Reverberation provides part of the explanation for the divergence in outcome between Zambia and Malawi. Zambia was criticized more sharply, had more attention on its actions, and had more pressure applied on it because of its stance. The sharp pressure led to greater suspicion that there were other reasons for the U.S. pressing for the change. This in turn made Zambia more reluctant to accept the genetically modified food aid. The U.S. attempts at changing the win-set for Zambia and Malawi caused negative reverberation in Zambia.

Some scholars agree with the thinking that the U.S. pushing for acceptance of GM technology can be counter-productive. Cooke and Downie (2010, 3) have this to say about it: “U.S. advocacy for biotechnology may in fact be counterproductive, given the polarized tenor of previous debates and widespread public suspicion that such advocacy is merely a front for powerful commercial interests.”

## 4.3 Forms of International Pressure

International pressure is meant to persuade or coerce states into conformance with a previously defined standard or action. In this dissertation, international pressure, which comes from Putnam’s Level I, was meant to change the win-sets of Zambia and Malawi by attempting to persuade them, sometimes forcefully, to accept the genetically modified food aid being offered.

The next sections discuss different forms of Level I international pressure and how they are applied in specific situations. These forms include aid

conditionality, international norms, and public opinion.

### 4.3.1 Aid Conditionality

The concept of aid conditionality is simple: donor countries make certain demands of the recipient countries and tie the demands to continued aid. Recipient countries can either comply with the demands of the donor country or institution and continue receiving aid, or they can refuse to comply and risk the discontinuation of aid (Emmanuel 2013, 415-16). There are different types of conditionality which are dependent on what the donor is demanding. Political aid conditionality demands that political reform take place before aid continues. Economic conditionality demands economic reforms. In the 1990s, at the height of aid conditionality, many developing countries were subject to aid conditionality. Conditionality in aid rose to prominence in the 1990s as a means for the U.S., IMF, World Bank and other international institutions to force reforms in developing countries. Indeed, the U.S., IMF and World Bank had an entire program, the Washington Consensus, predicated on the thinking that all developing countries needed to take the same set of actions in order to advance economically and politically. Certain demands were made of developing countries, including creating poverty reduction strategies that included opening markets to free trade, tightening government and civil service belts, and privatization of government-owned industries. These demands were made of countries that were already receiving aid or had asked for more (Stiglitz 2002,16, 53-54). If one were to use Putnam's two-level theory for any international

bargaining happening between a developing country and an international entity, aid conditionality would be considered a Level I activity and pressure.

Nikolas Emmanuel, in his article, “Democratization in Malawi: Responding to International and Domestic Pressures,” argues that there are conditions under which aid conditionality can be successful. Emmanuel’s article discusses the democratization of Malawi in the 1990s. He argues that there were three factors that helped Malawi respond to the demands of the U.S. and move towards democracy: high levels of aid dependency (defined as the inability to perform core functions without the influx of foreign aid or expertise (Emmanuel 2013, 420), close interdonor coordination, and domestic opposition within the recipient country (2013, 416). Crucially, Emmanuel’s argument concerns both domestic and international influences as necessary for aid conditionality to work (2013, 417). This is easy to relate to Putnam’s framework. The U.S., the Level I negotiator in this case, applied pressure to Malawi, the Level II state, to get them to democratize. Both the U.S.’s Level I pressure and Malawi’s Level II domestic situation played a role in bringing about Malawi’s democratization.

Brett Carter (2016) also makes the argument that aid conditionality and international pressure can be beneficial, particularly in Africa. Carter argues that elections bring about opportunities for citizens to organize themselves and protest oppressive governments. By requiring regular elections in African nations, Western donors and creditors force African autocrats to provide de facto opportunities for protests against their government (Carter 2016, 39). Carter points out that it is exceedingly hard to tie aid conditionality and international

pressure to a reduction in human rights abuses, for instance, especially in light of the poor record of international institutions in actually tying aid to issues like good governance, but argues that there is compelling if not conclusive evidence that the pressure is effective (2016, 42). Carter argues that state leaders were less likely to employ repressive measures against their citizenry when the state was at the height of receiving financial aid and debt-relief. Indeed, Carter's research shows that African prodemocracy activists have become bolder because of their belief that they will face fewer repercussions if their country is receiving Western aid (2016, 43-4). This is important to this dissertation because Carter studies situations in which direct actions were not necessarily taken, but international pressure was still effective. This is true of the Level I international pressure that was applied to Zambia and Malawi. No direct action was taken or even threatened, but international pressure still played a role. In the case of Malawi it played a positive role. In the case of Zambia, the pressure backfired and negative reverberation set in.

There are other scholars who argue against the efficacy of aid conditionality in applying Level I international pressure to bring about real change in developing countries. Christopher Kilby argues in his 2009 article, "The Political Economy of Conditionality: An Empirical Analysis of World Bank Loan Disbursements," that aid conditionality fails in part because the aid agencies fail to enforce their own conditions for aid (Kilby 2009, 51). This failure of enforcement then undermines the credibility and effectiveness of the conditionality. Kilby (2008, 52) gives several reasons for the lack of enforcement

including the idea that donors are going to give aid anyway and are reluctant to actually enforce the consequences when the idea is to help. Another reason given is that donating countries pressure international institutions to give the aid regardless of past performance. In Zambia and Malawi this could have meant that any threat by the U.S. to stop providing aid should the countries refuse the proffered food aid could have been seen as having no force. The U.S. would have been reluctant to threaten or enact any situation where it meant people would go hungry.

Scholl (2009) also discusses the effectiveness of aid and the limits on aid conditionality by looking at what would be considered optimal foreign aid policy when there is a conflict of interest between the donor and the recipient government. Scholl's article is largely theoretical and concludes that aid conditionality is most effective in bringing about change when the conditions given are "supportable by the threat of a permanent aid cutoff" (Scholl 2009, 378). This is tied to Kilby's (2009) article above where if made, threats must be carried through in order to effect change.

Dunning (2004) argues that there are conditions under which aid conditionality can be effective. Dunning (2004, 412-13) looked at foreign aid given during and after the Cold War and concludes that in the midst of the Cold War any conditionality threatened was ineffective because the political situation between the U.S. and the Soviet Union meant that aid was in part about the recipient country's loyalty to one side or the other. This meant that threatened cutoffs of aid for anything besides acts of disloyalty were unlikely. After the Cold

War Dunning shows that aid conditionality became more effective because donor countries were focused on more than loyalty to government type.

There are strong links between aid conditionality and the situation in Zambia and Malawi in 2002, including why the pressure exerted should have been successful. In the rest of this chapter, the situation in the countries contained the elements Emmanuel argues are necessary for aid conditionality to work. Those elements include high levels of aid dependency, close interdonor coordination, and domestic opposition within the country, discussed at length in Chapters 5 and 6. Zambia and Malawi both had high levels of aid dependency (see Emmanuel 2013, 428 for specifics on Malawi's situation), there was a concerted effort by the U.S. WFP, and other international institutions to apply pressure (discussed later in this chapter), and there were domestic elements that greatly opposed the idea of accepting the food aid. However, there was one crucial component missing in the situation, and that was specific threats of aid withdrawal and specific demands. This did not rise to the level of aid conditionality because as far as author can find there was no threat either implied or explicit that future aid depended on their acceptance. Humanitarian aid generally falls into a different category, meaning that the only thing the donor institutions could do was pressure. Public opinion and potential international condemnation would not allow them to condition future humanitarian aid on the acceptance of the genetically modified food aid.

### 4.3.2 Norms

Another example of how international pressure can work from Level I is given in the work on the effects of norms. Norms form a critical part of the international system where much of international law has not been written and enforcement of behaviors can be difficult. Norms help determine whether a behavior is considered acceptable by the international community. In their influential 1998 article, Finnemore and Sikkink define a norm as “a standard of appropriate behavior for actors with a given identity.” (1998, 891) Jepperson, Wendt, and Katzenstein (1996, 54) define them as “collective expectations about proper behavior for a given identity.” Norms establish expectations about the identity of actors in certain environments and how those actors will behave in that environment. According to Jepperson, Wendt, and Katzenstein, norms are either constitutive or regulatory. If they are constitutive then norms “specify the actions that will cause relevant others to recognize and validate a particular identity." In contrast, regulatory norms prescribe or proscribe behaviors for identities that were previously established (1996, 54).

Finnemore and Sikkink (1998) ask the question of how we can know a norm when we see one. According to their argument, we can only see indirect evidence of norms since they are not written down or codified anywhere. Norms have a quality of “oughtness” or shared moral assumptions about behaviors. We can see evidence of norms in justifications of actions and communication between actors. Understanding whether a norm has been formed is more art than science. As yet there is no distinct cutoff line of conformity that determines

that something has in fact become a norm. And indeed, not all norms are global. Finnemore and Sikkink argue that some norms may always remain regional, but this does not preclude their inclusion in the category of a norm (1998, 892).

All of the preceding argument raises the question of why norms are important to international relations theory. First, norms matter because the formation of norms lies outside of either the state or any international organization (Wiener 2009, 176). This makes the study of what norms are and how they are formed critical to an understanding of the international system. In addition, as they are formed and gain strength, norms begin to act as structures in the international system, and thus they begin to mold and shape states' behaviors (Fiorini 1996, 364; see also Thomson 1993, 72). Thus, norms become a mechanism for explaining change.

In her article, "Ideas, Interests, and Institutions: Challenging the Property Rights Paradigm in Botswana" Poteete (2003) argues that it is important to remember that developing states may react differently than industrialized states to ideas and norms because of their lack of established bureaucracies and expertise in different fields, especially that of economics. This position then privileges institutions over ideas when it comes to implementing new policies. According to Poteete, "Institutions influence the degree of attention-specific set of policy-makers give to ideas from particular sources. And institutions determine the degree of influence any given set of ideas must achieve to change or block changes in policy." (2003, 528) Poteete looks at Botswana and its decisions over land property rights. This article points out that in the area of norm competition it

is important to consider that developing countries may be operating under different constraints than industrialized countries, and therefore norms may not act in the same way.

The idea that developing countries may react unpredictably is important to this dissertation where reverberation and the attempts of Level I players such as the U.S. and WFP to change the win-sets of Zambia and Malawi. Both the U.S. and the WFP, as well as other Level I institutions, were playing without complete information or knowledge of how Zambia and Malawi would react to the pressures being applied to them.

Though he does not refer to it specifically as a norms issue, Darren Hawkins discusses the international pressures put on Chile in the 1970s to respect human rights (Hawkins 1997). A military coup against Salvador Allende's government in 1973 led to an authoritarian regime which curtailed many of Chile's traditional and independent political groups. Disappearances and outright murder became common (Hawkins 1997, 409-10). International pressure built through the 1970s, with some countries cutting off diplomatic ties and terminating economic and military aid to the government. In 1974, the United Nations took the then unprecedented step of condemning the Chilean government for its human rights abuses. All of this pressure had mixed results, but continued through the 1970s. The election of Jimmy Carter in 1976 meant the end of U.S. support and aid. At the same time, human rights groups continued their campaign against the regime. However, it was not until the Chilean economy began to improve and soft-liners began to have more impact that the

international pressure could have enough effect to affect change (Hawkins 1997, 411-18). Hawkins argues that there were three reasons international pressure eventually became effective. The first is that there was a low cost associated with easing repression. The second is that there were factions within the regime that were responsive to the pressure being applied by the international community. The third was that there were relatively strong societal norms associated with human rights and widespread agreement that those norms had been repeatedly violated (Hawkins 1997, 408-09).

Hawkins' reasons for effectiveness can be partially applied in the cases of Zambia and Malawi. For these countries there was not a low cost with acceding to the U.S.'s wishes, but there were certainly factions within each government that responded well to the pressure. The third reason for effectiveness, norms, can be seen in the discussion over whether it was right to let people starve to death now by not giving them the genetically modified food, or risk them getting sick from eating the genetically modified food.

Indonesia after the departure of President Suharto is another example of international pressure being effective in the enforcement of norms. After years of brutal labor union repression under Suharto, Indonesia was ripe for reforms. President Habibie chose to implement what has been referred to in the norms literature as "instrumental adaptation," that is, Indonesia chose to make strategic changes that would ease international pressures without implementing enough reform to truly change the labor situation (Caraway 2004, 35). In the case of Indonesia international pressure came from international institutions including the

International Labor Organization (ILO) and foreign governments. Though the pressure was mostly kept behind the scenes, criticisms by the ILO over labor practices slowly worked. In addition, the IMF encouraged ratification of reforms which would bring about more flexibility in Indonesia's labor institutions (Caraway 2015, 36). Kai He also discusses Indonesia's response to international pressure after Suharto (2008). He argues that it was systemic pressure from the international system that brought about reform (2008, 51).

### 4.3.3 Other Pressures

In countries with few labor, environmental, or quality standards, international pressure can be both immense and effective. Mahelet Fikru argues that this has been the case in Africa, where international markets and importers have the clout to help enforce standards that have not already been put in place by the country (2016, 296). Indeed, Fikru contends that the implementation of standards cannot be understood without the international component. Fikru uses stakeholder theory to argue that one must take into account that there may be stakeholders outside a country and that they may subsequently be able to impose standards where none exist as a condition of their continued interest (2016, 297). This argument brings together elements of both norms and aid conditionality in that the standards are norms and continued investment is dependent upon the implementation of those standards. It is also an argument for there being multiple factors that must be taken into account in order to understand a situation.

In his article on religious freedom reform in Turkey, Kilinc puts forth international pressure as the reason behind the otherwise puzzling religious freedom reforms between 2000 and 2012. Though there are many arguments that could be used, Kilinc concludes that the decisive factor was the rise of factions in Turkey who sought to join the European Union but knew that Turkey's lack of religious freedom would not pass muster with the EU (2014, 127-8). As with Zambia and Malawi, this was international pressure of a different sort in that the pressure was not necessarily explicit, but was there nevertheless because of known standards.

International pressure is not just effective in the developing world. In their article on economic vulnerability, Eggenberger and Emmenegger (2015, 491) argue that small states are subject to the whims of larger states, since they are more dependent on foreign markets, are more vulnerable to change in the world economy but have less political clout than larger states. In this they are much like developing countries, and thus serve as good examples of how international pressure can work. The authors discuss the examples of Liechtenstein and Switzerland in responding to international pressure to change their banking secrecy laws. As with many of the examples used, the successful change in Liechtenstein was brought about due to a combination of both domestic and international factors.

## 4.4 Evidence

Pressure came from all sides, but was not limited to pressure to accept the genetically modified food aid. The attempts at Level I pressure came in different ways from different international entities. Some attempts at pressure were personal, attempting to manipulate emotions or point out what the speaker had in common with Africans, explaining the necessity of accepting the food as well as the acceptability of the food for others. Other attempts were practical, talking about the unlikelihood of being able to replace the genetically modified food with nongenetically modified food. The attempts at pressure from Level I came from all sorts of institutions and countries, including the U.S. in the form of in-country ambassadors and USAID officials, the UN in the form of the WFP, international activist groups such as Greenpeace, the World Health Organization, and even former James Bond actor Roger Moore, acting as a UNICEF Goodwill Ambassador.

Zambia made the decision to reject the food aid in mid-August of 2002. Malawi made the decision to accept the food aid shortly thereafter, in early September of 2002, accepting it on the condition that the food not be distributed until it had been milled in order to prevent the grain from being planted, thus disturbing the Malawian ecosystem and risking crops being rejected by the EU. In an attempt at negotiating with Level I, Malawian President Bakili Muluzi had requested that the U.S. pay for the cost of milling the genetically modified seed as part of Malawi's conditions for accepting the food aid, but had been refused.[12]

[12] Staff Reporter, "Milling GM Food Aid Costs Malawi US$20 Million," *The Nation,* September 11, 2002, http://www.afrol.com/News2002/maw014_gm_foodaid.htm (accessed November 11, 2017)

These decisions changed the nature of the pressure for Zambia and Malawi.

### 4.4.1 Pressure from the U.S.

Agencies and people pushing for acceptance of the genetically modified food aid did not limit their pressure to the political or practical. An additional component of pressure they used were meant to illustrate how Americans, the officials themselves, and their families all ate the food. In addition, various officials pointed out the possible toll that could result from ignoring the proffered food aid. In many of these statements, made before Zambia or Malawi's decisions, the U.S. was appealing to all of the countries facing famine. U.S. Ambassador to Zimbabwe Joseph Sullivan offered this assurance in an interview: "We Americans eat genetically modified corn with no problems. We see no reason why it should present a problem to any other country."[13] International Monetary Fund Resident Representative Mark Ellyne also agreed that Americans ate genetically modified corn with no issues: "We have corn that we eat including a lot more quantities that have been fed to the animals that we consume and there has been no side effects."[14] Then Secretary of State Colin Powell accused southern African nations of failing to properly address the coming famine by refusing the food: "In the face of famine, several governments in southern Africa have prevented critical US food assistance from being distributed to the hungry by rejecting biotech corn which has been eaten safely around the world since

---

[13] Staff Reporter. "Zimbabwe: Interview with U.S. Ambassador Joseph Sullivan, *IRIN*, June 27, 2002. http://allafrica.com/stories/200206270332.html (accessed August 15, 2017)
[14] Joe Kaunda. "It Will Be Tragic if Lusaka Rejects GM Maize- Ellyne", *The Post* August 12, 2002, http://allafrica.com/stories/200208120657.html (accessed August 15, 2017)

1995."[15] USAID administrator Andrew Natsios went even further. Rather than generic Americans, Natsios made the argument that he both purchased and fed it to his wife and kids all the time.[16] Such assurances were meant to reinforce the idea that the U.S. was not trying to push poison onto Africans.

In Zambia, Robert Sichinga, a member of the Zambian parliament in 2002 recalled meetings at the U.S. embassy where similar assurances were made: “the embassy had organized these kind of individual, this particular lobby that was for genetically modified… was basically justifying the fact that the aid was justified because we needed that assistance and there was nothing wrong with that food, Americans were eating it and why shouldn't we eat it?”[17]

Another source of personal pressure from the international community came in the form of stressing the human cost and number of lives that would be lost if the countries did not accept the food. UN Ambassador to the U.S. Tony Hall spoke of the number of people at risk, using the UN estimates of 14.5 million people being at risk of starvation in Southern Africa alone. He said, "These people do not have food today. Zimbabwe is heading for disaster. Zambia may be even worse." Ambassador Hall then criticized the “well fed” experts, going on to say: "As the region heads for famine, vulnerable people will perish. While the US respects the rights of countries to make their own decisions about

---

[15] Staff Reporter. “Southern Africa: Powell slams Southern African States Over GM Aid Food.” *The Standard.* September 5, 2002. http://allafrica.com/stories/200209050638.html (accessed August 15, 2017)

[16] Brighton Phiri and Webster Malido. “Zambia: Govertnment is Undecided Over GM Maize-Kavindele.” *The Post.* August 12, 2002. http://allafrica.com/stories/200207260327.html (accessed August 15, 2017)

[17] Robert Sichinga, Personal Interview, August 24, 2016, Lusaka, Zambia

biotechnology, other donors have simply not stepped up to fill the gap if US food aid is turned away."[18]

In August of 2002, just before the decision was made in Zambia to reject the food, the U.S. government accused the Zambian government of underestimating the number of people at risk of starvation in Zambia, claiming that the number was 2.5 million in Zambia alone. The statement went on to say that the U.S. was not making any effort to distinguish between GM maize and non-GM maize because both met safety standards set by regulatory agencies. Finally, the U.S. responded to the belief that they were pushing GM food for ulterior motives by reminding the gathering that the food was procured on the U.S. market and shipped by the U.S. at taxpayers' expense.[19]

The pressure and rhetoric towards Zambia only grew from there. Ambassador Tony Hall's rhetoric in particular became harsher. In December of 2002 Hall told reporters that, "People that deny food to their people, that are in fact starving people to death should be held responsible. . . for the highest crimes against humanity in the highest courts in the world."[20] He went on to say: "I see this as a major problem. And I've got to the point where you get so frustrated with these people, they're denying food to their own people, they're using it as a political weapon, and nobody says anything, nobody does anything. These leaders are getting away with a tremendous amount of illegal acts and it's time

---

[18] Bivan Saluseki. "Zambia: Zambia Faces a Disaster if it Continues to Block Food Aid." *The Post*. November 17, 2002. http://allafrica.com/stories/200211190565.html (accessed August 15, 2017).
[19] Brighton Phiri. "Zambia: U.S. Sheds More Light on GM Maize." *The Post*. August 14, 2002. http://allafrica.com/stories/200208140074.html (accessed August 15, 2017).
[20] Staff Reporter. "Kenya: Food Relief Refusal Irks U.S. Official." *The Standard.* December 7, 2002. http://allafrica.com/stories/200212070115.html (accessed August 15, 2017).

they be held accountable, especially if people die."[21]

Another type of pressure from the U.S. was of a more practical nature. Despite the accusations of some in Zambia, the U.S. claimed it simply did not have the capacity to deliver only food that was not genetically modified, and that the food that was being delivered was the only food that was available. Though he was speaking about Zimbabwe, Ambassador Joseph Sullivan was describing the situation for all of drought stricken southern Africa when he said, “So for us to be able to be as helpful as we wish to be, it would be important for the government of Zimbabwe to waive this restriction and to allow us to supply the food that we do have available.”[22] Andrew Natsios of USAID echoed this sentiment when he said there was no way for the U.S. to produce maize specifically for southern Africa because the grain came from the Midwest where most of the food was produced using biotechnology methods.[23] The message from the U.S. was clear: accept the food or get nothing at all from the U.S.

### 4.4.2 The World Food Program

Pressure was not just coming from the U.S. The World Food Program (WFP), a UN program, was in charge of distribution of the food. Their position on the food was more ambiguous than that of the U.S., with an apparent struggle for

---

[21] Staff Reporter. “Southern Africa: U.S. Hits Out Over African Food Policies.” Agencia de Informacao de Mocambique (Maputo). December 17, 2002. http://allafrica.com/stories/200212210065.html (accessed August 16, 2017).

[22] Staff Reporter. “Zimbabwe: Interview with U.S. Ambassador Joseph Sullivan, *IRIN*, June 27, 2002. http://allafrica.com/stories/200206270332.html (accessed August 15, 2017)

[23] Brighton Phiri and Webster Malido. “Zambia: Govertnment is Undecided Over GM Maize-Kavindele.” *The Post.* August 12, 2002. http://allafrica.com/stories/200207260327.html (accessed August 15, 2017

neutrality. The WFP had more logistical concerns. Much of the food that had been delivered was sitting in warehouses waiting for distribution and there was a time limit on how long the food could sit before spoiling. If the countries were not going to accept the food, the WFP needed to know so they could move the food where it would be used. Days before the decision was made by Zambia to not accept the food, Zambia's WFP representative, Richard Ragan pointed out that the lack of decision was preventing the WFP from progressing in their fight against the famine, saying, "We have impressed upon the Zambian authorities the need to make a decision on the matter. The sooner they decide what they are going to do, the sooner we can get on with the business of feeding hungry people."[24]

In an interview Judith Lewis, the Regional Director of WFP, she stated the neutral position of the WFP stating that it was: "an issue between the recipient government and the donor - the country providing the assistance. The World Food Programme accepts only food that has been cleared as fit for human consumption and we move that food."[25] In addition, Richard Ragan also stated that the WFP had not received any reports of genetically modified food negatively affecting humans.[26] WFP Executive Director James Morris also stated that UN agencies like the WFP, the Food and Agriculture Organization (FAO), and the

---

[24] Staff Reporter. "Zambia: WFP Urges Government to Decide Whether to Accept GM Food." *IRIN.* July 3, 2002. http://allafrica.com/stories/200208130608.html (accessed August 15, 2017)
[25] Staff Reporter. "Southern Africa: Focus on GM Food Aid." *IRIN*. July 2, 2002. http://allafrica.com/stories/200207020658.html (accessed August 16, 2017); See also Duncan Ndhlovu, Personal Interview, August 13, 2016, Lilongwe, Malawi
[26] Staff Reporter. "Zambia: WFP Urges Government to Decide Whether to Accept GM Food." *IRIN.* July 3, 2002. http://allafrica.com/stories/200208130608.html (accessed August 15, 2017)

WHO, as well as some EU countries, had confirmed that they had seen no health problems arise because of the consumption of genetically modified food.[27]

In addition to publicly stating that they did not believe genetically modified food to be dangerous to human health, the WFP went a step further and stated that they would not be able to successfully end the famine in southern Africa without the use of genetically modified grain. WFP Executive Director James Morris stated that, "I respect the right of every country on whether or not they would accept bio-tech, genetically modified maize. It's their choice." However, he then went to say that, "But we won't be able to do the job to the full magnitude necessary without the use of bio-tech, genetically modified food."[28] Another WFP spokesperson also confirmed the right of the governments to accept or reject the food but stated that such a decision would "complicate the work of WFP, which may not be able to respond to all those in need of food."[29]

Mrs. Beatrice Chola of Zambia has a different memory of what the WFP was doing at the time. Mrs. Chola is the founder and Executive Director of an organization called Bwafwano in one of Lusaka's largest compounds, Chizanga. Bwafwano has many functions, among them sending out home health care workers who can bring supplies and check in on those who are most ill in the community. Bwafwano also runs a school for about 600 children in the compound, only a small percentage of all the children in the community. Before

---

[27] Brian Ligomeka. "Malawi: Genetically Modified Food to Save Starving Africans." *Malawi Insider*. September 18,2002. http://allafrica.com/stories/200209180420.html (accessed August 15, 2017).
[28] Brian Ligomeka. "Malawi: Genetically Modified Food to Save Starving Africans." *Malawi Insider*. September 18,2002. http://allafrica.com/stories/200209180420.html (accessed August 15, 2017).
[29] Rory Carroll. "Zambia: GM Food Refusal Sets Precedent." *Mail and Guardian (Johannesburg)*. November 1, 2002. http://allafrica.com/stories/200211010493.html (accessed August 17, 2017).

the famine in 2002, Bwafwano depended on food aid from USAID to feed the children of the school, and sometimes their families. Once the famine came and the government rejected the food aid, Bwafwano was left without the means to feed almost 1000 people a day. Mrs. Chola is well-connected and immediately went to her contacts at WFP and UNICEF. According to Mrs. Chola, her pressure was successful. Of the pressure put on by the WFP she said: "Well, they [the WFP] tried very much. They tried very very much to pressure the government…"[30]

In response to the pressure of the WFP to make a decision about whether to accept the food, the Zambian Minister of Agriculture Mundia Sikatana struck a conciliatory if firm note, saying, "The government appreciates the assistance of the United States but we have a moral obligation to look after the health of our people." He went on to say, "We are mindful of the gravity of the situation and a decision will be made sooner rather than later. Right now it is with the president and we await his response."[31] In addition, the Zambian government took the opportunity provided by the WFP to once again state Zambia's objection to the food. Vice President Enoch Kavindele also expressed gratitude for the food to the UN Special Envoy but again talked about the fear of Zambians that the food would do them harm. President Mwanawasa said in the same forum that there is no justification for feeding people poison.[32] However, Zambia's attitude was not

---

[30] Beatrice Chola, Personal Interview, July 7, 2016, Chizanga Compound, Lusaka, Zambia
[31] Staff Reporter. "Zambia: WFP Urges Government to Decide Whether to Accept GM Food." *IRIN.* July 3, 2002. http://allafrica.com/stories/200208130608.html (accessed August 15, 2017)
[32] Brighton Phiri. "Zambia: Implications of GMFs Scare Government." *The Post.* September 10, 2002. http://allafrica.com/stories/200209100320.html (accessed August 15, 2017).

always grateful. Dr. Mbikusita-Lewanika, a member of the team of scientists sent to research genetically modified food criticized the WFP by saying that, “it was not in order for the United Nations wings to propagate the interests of one nation at the expense of those of many member countries.”[33]

The WFP was sympathetic to the views held by many Africans that the food would do them harm, but ultimately were not in a position to provide southern Africa with sufficient food that was certified non-GMO. This has been a matter of contention amongst countries and others who criticized the WFP’s response. In 2002 Greenpeace contended that the WFP could have either sourced the food from elsewhere, or that they U.S. could have provided money instead of food.[34] The money would have allowed the countries to buy grain they trusted from sources they trusted. However, this ignores the fact that both the WFP and USAID are large bureaucracies who cannot change their policies quickly or nimbly. Though there were other solutions, at the time they were not available.

That they understood the pressure the countries were under was clear when WFP Regional Director Judith Lewis was asked if the WFP would take the position that if a country did not want the genetically modified food aid they would get nothing. She said, “No, we wouldn't want to do that. I have seen too many of those children who need this food and I have seen the situation and we have to

---

[33] Staff Reporter. “Zambia: Genetically Modified Organisms a Health Hazard- Report.” *Times of Zambia.* December 6, 2002. http://allafrica.com/stories/200212060258.html (accessed August 14. 2017).

[34] Greenpeace. “USAID and GM Food Aid,” https://www.iatp.org/sites/default/files/USAID_and_GM_Food_Aid.htm (accessed November 6, 2017)

do everything we can."[35]

### 4.4.3 The European Union

The role of the EU is a somewhat strange one in these cases. The EU itself should have represented a major international pressure, yet I found no evidence of direct involvement or direct threats from the EU that Zambia and Malawi's crops would be unacceptable should these countries accept genetically modified food aid. Indeed, EU Commissioner for Cooperation, Development and Humanitarian Assistance, Paul Nielsen, actively denied any threats or involvement, saying:

> From the start, we have consistently stuck to our advice that we do not see a problem for the consumption of that maize. At the same time, we deny US allegations that European countries have threatened Southern African countries [that we would] reduce their economic support and their access to the EU market if they accepted GM maize. (Misser 2003, 33)

Still, many in the U.S. accused the EU of having strict regulations but doing little to assure Africans that eating the food was acceptable, that concessions would be made even if the countries accepted the genetically modified food aid, or that the EU would provide alternative sources of food so that Zambia and Malawi could maintain agricultural trade with the EU. This was the argument between the U.S. and EU over whether GMOs were acceptable being played out in real time and with real and severe consequences. As was seen in Chapter 2, it could be that the loss of EU trade might have been more than replaced by other markets, but that does not appear to have been considered.

---

[35] Staff Reporter. "Southern Africa: Interview with WFP Regional Director Judith Lewis." *IRIN*. July 3, 2002. http://allafrica.com/stories/200207030690.html (accessed August 16, 2017)

Because the EU was not actively involved in the debate, this Level I pressure is an indirect one. It was fear and perception of EU policies and loss of trade, rather than statements or direct pressure from the EU itself, that made Zambians and Malawians hesitate to accept the genetically modified food aid.

From the statements of various government and NGO players it is evident that fear of the EU's standards on genetically modified food and the subsequent effect on trade with the EU played a large role in the countries' decisions, yet as far as I could find, the EU largely stayed silent on the entire issue. The EU was urged by the U.S. to take a stand (albeit one that the U.S. wanted) or to help provide food if they could not support the idea of the genetically modified food aid. The U.S. ambassador to the UK, William Farrish, blamed the refusal of the food aid on "the EU's unilateral, illegal and unjustified actions, taken without any scientific, health or environmental basis, which constrain choice and opportunity worldwide."[36] Ambassador Tony Hall also called on Europe to either help avert the crisis or to assure Africans that GM food was safe, saying: "The EU has made some great statements (on the safety of GM food), at the same time there are people who have thrown a lot of doubts, who have been neutral," he said. "We cannot be neutral on this issue. . .We need strong statements. We are beyond this discussion (on GM) here."[37] In addition, then President George Bush weighed in, saying, "This [the EU's regulations] has caused many African

[36] William Farrish, "Biotech is Benign," *The Guardian,* June 4, 2003. http://www.guardian.co.uk/gmdebate/Story/0,2763,969993,00.html (accessed November 1, 2017).
[37] Staff Reporter. "Kenya: Food Relief Refusal Irks U.S. Official." *The Standard.* December 7, 2002. http://allafrica.com/stories/200212070115.html (accessed August 15, 2017).

nations to avoid investing in bio-technologies for fear that their products will be shut out of European markets. European governments should join - not hinder - the great cause of ending hunger in Africa."[38] U.S. Trade Representative Robert Zoellick was also critical of the EU's stance and its consequences, saying, "It gets much more worrisome when the European anxieties and fears and paranoias prevent starving people from getting food."[39]

In October of 2002 the EU published a new policy on genetically modified organisms. In Zambia this was seen as a sign of support for their stance, with the Ministry of Science, Technology, and Vocational Training stating that, "the EU is making exactly the same argument that Zambia is making before the international community and especially our food donors such as the World Food Programme (WFP)."[40] The fear of being punished with a cessation of trade with the EU for accepting genetically modified food because of its effect on other crops was a factor in stopping Zambia from accepting the food altogether and make Malawi insist that the grain be milled before it entered the country so farmers would not be tempted to plant the grain despite government warnings.

Many statements were made about the effect on trade with the EU. Bernadette Lubozhya, a scientist with the Kasisi Agricultural Training Centre which was conducting a study on the feasibility of accepting the food urged the Zambian government to not accept the food because of the implications of EU

---

[38] Adam Entous, "Bush Blasts Europe Over Food Aid," *Toronto Star*, May 22, 2003.
[39] Staff Reporter, "GM Food Aid: U.S. on Warpath Over GM Food," *The Ecologist,* March 2003.
[40] Brighton Phiri. "Zambia: Government Welcomes EU's Policy on GMOs." *The Post*. November 1, 2002. http://allafrica.com/stories/200211010138.html (accessed August 15, 2017).

trade. Lubozhya feared that not only maize and grain markets would be affected, but that the EU would also begin to reject flowers, fruits, vegetables, tobacco, coffee, and other products because of its ban on GMOs.[41] The president of the Zambia National Farmers Union Ajay Vashee also worried that accepting the grain would create problems in the export markets, especially since Zambia had no policy of their own regulating genetically modified organisms.[42]

In Malawi different decisions were being made on how to handle the offer of genetically modified food aid. As has been mentioned, they agreed to accept the maize on the condition that it be milled first. Madalitso Mwale, Assistant Director of the Department of Disaster Management Affairs, when asked about the influence of the EU on the decision said, "That's why there's that caution to say you only accept the GMO maize in the form of flour. So that it comes here as flour, but not as maize seed…the people are saying if it comes as flour then we will have no problems because we will be distributing flour, not the maize. So maybe it's from that understanding that it's safe to bring the GMO maize, which will be in the form of flour, not the seed here."[43]

The Zambian government faced down criticism of the decision to deny Zambians the genetically modified food aid by arguing that keeping the export market open was more important. When asked why the government was

---

[41] Bivan Saluseki. "Zambia: Lusaka Shouldn't be Pushed Into Accepting GMOs." *The Post.* July 31, 2002. http://allafrica.com/stories/200207310099.html (accessed August 18, 2017)
[42] Brighton Phiri and Joe Kaunda. "Zambia: Don't Allow GM Maize in Absence of Policy- ZNFU." *The Post.* October 16, 2002. http://allafrica.com/stories/200210160640.html (accessed August 17, 2017); See also Staff Reporter. "Zambia: Stays Put Over GMOs." *Times of Zambia.* October 31, 2002. http://allafrica.com/stories/200210310666.html (accessed August 15, 2017).
[43] Madalitso Mwale, Personal Interview, August 16, 2016, Lilongwe, Malawi.

allowing people to starve instead of feeding them, Minister of Agriculture Sikatana countered with, "We stand firm in our rejection of the maize for fear of losing our export market that is doing well currently." Sikatana went on to say that Zambia was eager to grow its trade in produce with Europe and that the U.S. had not taken into consideration the implications of trade with Europe when it pushed for acceptance of the food aid.[44] In an editorial by the Editorial Board of the Times of Zambia, it was pointed out that the rest of the Western world had failed to break the EU's resolve to reject genetically modified food, so why would Zambia give in?[45]

The EU represented an entirely different type of pressure for Zambia and Malawi, that of the almost silent partner who still insists that things be done their way. In the case of Zambia, fear of the cessation of trade with the EU overcame the desire to feed its citizens. In Malawi, fear of cessation of trade prompted a different solution, one that would help feed the people while hopefully avoiding punishment from the EU. Either way, the EU represented an enormous though indirect international pressure.

### 4.4.4 Other Players

Other institutions, some IGOs and some NGOs, also offered advice and pressure on the issue of genetically modified food aid. The IGOs included the

---

[44] Ochieng Rapuro. "Zambia: Cynicism Still Hangs Over Biotechnology Foods." *The Standard (Kenya)*. November 11, 2002. http://allafrica.com/stories/200211120115.html (accessed August 16, 2017)

[45] Editorial Board. "Zambia: Opinion." *Times of Zambia*. October 31, 2002. http://allafrica.com/stories/200210310667.html (accessed August 14, 2017).

World Health Organization (WHO) as well as the Southern African Development Community). They each had different opinions on what Zambia and Malawi should do. The NGOs included Greenpeace and ActionAid, a large UK nonprofit. All of the statements were made after the decisions had been made in both countries, but were important nonetheless because Zambia was still being urged to reverse its decision to accept the genetically modified food.

In August of 2002, shortly after Zambia had officially rejected the aid, the World Health Organization came out in support of countries accepting the food. WHO had been asked to compile a report about the advantages and disadvantages of GMOs, but the decision to reject the food aid was made before the report was in.[46] WHO delivered the report in November. The report answered 20 questions about GMOs and tried to dispel fears about the safety of GMOs, claiming that they were safe for humans to consume. This failed to sway the scientists and government of Zambia, with the Minister of Health claiming that the report lacked authoritative answers and ultimately left the decision up to the individual countries.[47] WHO's official statement said in part:

> WHO believes that in the current crisis, governments of countries in southern Africa must consider carefully the severe and immediate consequences of limiting the food aid that is made available for the millions of people so desperately in need.[48]

WHO also predicted that without effective action 300,000 people would

---

[46] Staff Reporter, "SADC Awaits Report on GMOs," *The Herald,* October 14, 2002. http://allafrica.com/stories/200210140088.html (accessed August 15, 2017)
[47] Staff Reporter, "Zambia: We'll Stay Put on GMOs," *Times of Zambia*, November 20, 2002. http://allafrica.com/stories/200211200055.html (accessed August 16, 2017)
[48] Staff Reporter, Southern Africa: WHO Urges Acceptance of GM Food Aid." *IRIN*. August 28, 2002. http://allafrica.com/stories/200208280566.html (accessed August 15, 2017).

starve to death over the next six months. However, WHO's support of accepting the food was not universal. Andre Ouadraogo, a WHO regional nutritionist advisor talked about the differing opinions within WHO: "There is a definite split when it comes to GM. While some health officials are all for it, others were vehemently opposed to the use of gene altered maize without proper certification that it is 100 percent safe."[49]

The Southern African Development Community (SADC) pointed out that delays in decisions were creating operational problems for moving the food. SADC's recommendation was one that Malawi was already following—accepting milled grain while further information was sought on its potential benefits or harms.[50] This recommendation went unheeded by Zambia.

Smaller players also offered their opinion on what should be done. Greenpeace issued a statement in support of Zambia's decision saying that, "This decision is a triumph of national sovereignty. The US has been putting pressure on countries to accept the GM surpluses produced by its farmers."[51] The Greenpeace statement condemned the U.S. for its attitude and pressure towards the southern African countries and claimed that the stance was motivated by its links to large agro-tech companies trying to open new markets for their products.

---

[49] Staff Reporter, Southern Africa: WHO Urges Acceptance of GM Food Aid." *IRIN*. August 28, 2002. http://allafrica.com/stories/200208280566.html (accessed August 15, 2017).
[50] Staff Reporter. "Southern Africa: Divergent Views on Modified Foods Delay Food Aid." *The Daily News (Harare)*. October 1, 2002. http://allafrica.com/stories/200210010545.html (accessed August 16, 2017)
[51] Greenpeace, "USAID and GM Food Aid," https://www.iatp.org/sites/default/files/USAID_and_GM_Food_Aid.htm (accessed November 7, 2017)

ActionAid, a large UK charity, made a qualified statement by saying that Zambia's decision should be respected, as long as it didn't mean people would die of starvation. They further urged the U.S. to follow the UK's example by sending money rather than food.[52] And finally, the former James Bond actor, Roger Moore, who was acting as a UNICEF Goodwill Ambassador said in a statement issued after touring parts of Zambia that the genetically modified food aid could be a solution to Zambia's hunger if farmers pledged not to plant it.[53]

### 4.4.5 Response from Zambia and Malawi

Zambia and Malawi had very different reactions to the pressures coming from Level I. There is less evidence for what was happening in Malawi, but given the proximity of these two countries and the fact that they were in similar situations, it is likely that they were experiencing many of the same embassy meetings. Malawi and Zambia are close neighbors and likely would have experienced much the same thing. However, their responses were different.

All of the pressure applied gives rise to the question of whether the situation changed the relationships between the countries. According to Robert Sichinga, there may not have been tangible changes, but:

> They were very adversarial, they were very aggressive, they were, they would invite you to, say for instance, lunch, and they would push it down your throat, saying this is an important thing...And the question was, why were you pushing it against us, I mean it's us who are hungry, so why are you pushing it down our throats? And that seemed crazy rather than

---

[52] Rory Carroll. "Zambia: GM Food Refusal Sets Precedent." *Mail and Guardian (Johannesburg)*. November 1, 2002. http://allafrica.com/stories/200211010493.html (accessed August 17, 2017).
[53] Noel Sichalwe. "Zambia: GM Maize can be a Solution to Zambia's Hunger- James Bond." *The Post*. November 10, 2002. http://allafrica.com/stories/200211110551.html (accessed August 15, 2017).

> helping the situation. OK? And obviously the U.S. was very, very calm but the Embassy officials were very offended by a small country like Zambia rejecting buy a big scale supply offer.[54]

This statement by a Member of Parliament at the time indicates that the Zambian government was both aware and wary of the U.S. position. It also indicates that the Zambians were not pleased with the U.S. pressure. This suspicion of the U.S. motives would continue to grow in Zambia as it became clearer that they did not intend to accept the genetically modified food aid. This attempt by a Level I negotiator, in this case the U.S., to change the win-set on Level II by appealing to their humanity, went too far and negatively reverberated in Zambia.

Zambia did not remain passive or unresponsive during this time of immense pressure. Indeed, there were a variety of responses. There are many beliefs in Zambia and Malawi concerning genetically modified food, some of which persist to this day. Some people believed and still believe that pushing genetically modified food on Africans is a way for the U.S. to control what Africans grow, but also to keep Africans from prospering. The U.S. and international community push to accept the food aid was therefore extremely suspect to some in Zambia and Malawi. Robert Sichinga echoed the beliefs of many when he said:

> And then the other thing was that there was tremendous amount of pressure from the embassy officials of that day. And the question was, why were they pressurizing us if it was so good that it would appear on its own? Why were they doing that? So clearly it created suspicion to say well, you want to do this, and you need to understand the issue of HIV aids was said to have been an American generated strategy to limit or to cause this diseased to affect the African population. That is basically what

[54] Robert Sichinga, Personal Interview, August 24, 2016, Lusaka, Zambia

> it was, so clearly the relationship was that of great suspicion, that was this another method that they want to use to limit the quantity, the population, the growing population of the Africans, and therefore restrict their capacity and ability.[55]

Other members of the government publicly echoed Mr. Sichinga's sentiments. Charles Kakoma, also a member of the Zambian parliament in 2002, urged the Zambian government to burn the already delivered maize, saying, "By doing so we will be sending a signal to our donors that if they want to help, they should do so in good faith. In Zambia we value our lives. These lives cannot be experimented upon." Kakoma argued that the maize should not be donated at the expense of starving Zambians.[56]

The fear of being experimented on by the West was not limited to the government. The head of research and development at the All Africa Conference of Churches, Dr. Kunijwok Kwawang, accused the West of a new form of colonialism when he said, "The process of experimenting on us has turned us into guinea pigs," and went on to say, "This is a continuation of the slave trade in a modern form, including slavery of the mind, where they have made us believe that West is best." Dr. Kunijwok claimed that the West was taking advantage of the drought in southern Africa to, "force these foods down the throats of Africans." He then claimed that those who were in charge of the project were in business and, "the human-well being is not considered when

---

[55] Robert Sichinga, Personal Interview, August 24, 2016, Lusaka, Zambia
[56] Brighton Phiri. "Zambia: U.S. Sheds More Light on GM Maize." *The Post*. August 14, 2002. http://allafrica.com/stories/200208140074.html (accessed August 15, 2017).

people are out to make money."[57]

Not everyone believed the myth that the U.S. was experimenting on Africans and pushing the food for their own gain. Indeed, some believed that the pressure was coming from the opposite side, that those who were opposed to genetically modified food were the ones propagating the myths. Tamani Nkhono, then National Director for the Civil Society Agriculture Network (CISANET) in Malawi, stated, "There were a lot of myths about GMOs, how GMOS are made, the effects of GMOs, all those things. So there was all that talking, especially, because much of the position was coming from the EU. NGOs and the EU."[58]

On a related note, Dr. Luke Mumba, Dean of the School of Natural Sciences at the University of Zambia, noted that the EU was in a very different position than Africa when it came to food:

> Shortly, when foods that improve health and nutrition are common on the shelves (e.g. lower cholesterol, lower blood pressure, improve eyesight, etc.) European consumer resistance is expected to diminish. Whereas Europe has abundant food, with virtually everyone receiving an adequate diet, many in Africa suffer from hunger, malnutrition and poverty. Europe can afford the luxury of debate and delay of this technology whereas Africa cannot. Europeans see no need to increase their food output, whereas Africans can see every reason to do so. In the light of the need for increased farming productivity, Africa must make up its own mind and speak for itself.[59]

Other Zambian objections to the international pressure came in the form of claims of ignorance or protestation that the U.S. was not providing enough

---

[57] Staff Reporter. "Africa: Are Africans Guinea Pigs in Genetic Research?" *African Church Information Service.* January 27, 2003. http://allafrica.com/stories/200301290746.html (accessed August 4, 2017)

[58] Tamani Nkhono. Personal Interview, August 16, 2016, Lilongwe, Malawi

[59] Luke Mumba. "Zambia: Safety of GMOs." *The Post*. July 29, 2002. http://allafrica.com/stories/200207290123.html (accessed August 15, 2017)

information about the food or the science behind it. The U.S. protested that plenty of information had been given but that Zambia was choosing to act in disregard of the scientific facts.[60] After the decision had been made, President Mwanawasa dispatched scientists to the U.S., Canada, Europe, and South Africa to try to discover the truth about genetically modified foods.[61]

Officials in Malawi had a different view of what the U.S. was doing. Dr. Wilkson Makumba, now Director of the Chitedze National Research Station in Malawi, was, in 2002, the National Research Coordinator for the Ministry of Agriculture and as such was involved in the decision-making process. According to Dr. Makumba:

> Well I would not say it was not necessarily pressure, but advice. By then it was coming through, the problem that we had. There was hunger and they were saying, we have got aid, and this is the form of aid that we have. So it's up to you to accept it or not. Just like Zambia, because they had the alternative by then, you know? So at least they had the courage to say, no no no, to GMO, it shouldn't come to our country, because at least they had the alternative. Malawi did not have the alternative, that's why we had to accept it, but with the condition attached to it.[62]

Ultimately, what the Zambians wanted was for the U.S. to stop pressuring Africans to accept food they were uncomfortable with. That they felt they were being unfairly pressured is clear from the many statements made by officials at all levels. At the government organized conference in Lusaka Brigadier General Godfrey Miyanda, president of the Heritage political party, urged the U.S. to stop

---

[60] Ochieng Rapuro. "Zambia: Cynicism Still Hangs Over Biotechnology Foods." *The Standard (Kenya)*. November 11, 2002. http://allafrica.com/stories/200211120115.html (accessed August 16, 2017)
[61] Ranjeni Munusamy. "Zambia Rejects Mbeki Maize Offer." *Sunday Times (London)*. October 6, 2002. http://allafrica.com/stories/200210060093.html (accessed August 15, 2017).
[62] Wilkson Makumba, Personal Interview, August 16, 2016, Lilongwe, Malawi

threatening and intimidating Zambia. He said, "Don't intimidate us. Don't pressurise us to accept food which we don't know about." He went on to say, "I know, as former minister, that the US government has the capacity to fly in GM-free maize. Why stick to this maize which we are not comfortable with? If they are serious with their support, let them assist us with ships or other means so that we can get into our lakes and catch the fish to feed our people."[63]

## 4.5 Conclusion

This chapter has discussed Level I of a two-level game, and how it functions within Putnam's theory. International pressure takes various forms, including aid conditionality and norms. This chapter also presented evidence of how international pressure functioned on Level I. First, the U.S. applied pressure through official meetings at the U.S. embassy and with members of parliament to urge acceptance of the genetically modified food. U.S. representatives also made many statements urging acceptance. The WFP sought for a more neutral tone, making statements about the safety of the food aid, but also urging governments to accept the food in order to help their people. The EU was an indirect pressure. As was mentioned, the EU itself was criticized by U.S. officials and politicians for not being more proactive in urging Africans to accept the food aid and for allowing their own prejudices to stop them from helping more. Other international institutions also weighed in, adding to the pressure coming from Level I.

---

[63] Brighton Phiri, "Zambia: U.S. Comes Under Attack Over GMOs." August 13, 2002. *The Post*. http://allafrica.com/stories/200208130100.html (accessed August 15, 2017).

Zambia and Malawi responded differently to the pressure. Malawi, in a weaker position as will be seen in Chapter 6, agreed to accept the genetically modified food in September of 2002. However, Zambia chose a different path. The U.S., as a Level I player, attempted to change Zambia and Malawi's win-sets by swaying what was happening in both countries. In Malawi, the pressure was seen as advice. The U.S. attempts to change win-sets backfired dramatically in Zambia. In Zambia, that "advice" was met with defiance against what Zambians perceived as the hidden agenda of the U.S. Zambia was suspicious of the U.S. motives, convinced that the U.S. was attempting to experiment on Africans with genetically modified food, and that the U.S. was seeking to benefit its own companies by making Africans reliant upon U.S. companies for supplies. They believed that the U.S. was trying to intimidate them into accepting the food and that the U.S. could provide other food aid, but was choosing not to.

In Zambia, negative reverberation happened decisively. Zambia responded negatively to the pressure of the US, WFP, and other entities. Considering the lack of support for Zambia's decision, even from sources where they should have been able to expect support, such as the EU, and the pressure to conform and accept the food, Zambia's decision was bold. The evidence from Malawi is not quite as strong. It is clear that they took the international component somewhat in to their decision, but as we will see from later chapters, Malawi's domestic situation was different and they responded more to that pressure than to that put on them by the U.S. This leads to the next chapter, a discussion of the domestic pressures that were happening within the countries.

# CHAPTER 5

# LEVEL II: CIVIL SOCIETY

## 5.1 Introduction

Civil society is the first of the Level II domestic factors that is hypothesized in this dissertation as having played a role in Zambia and Malawi's decision-making process. Civil society is active in both countries, and various civil society groups in both countries were vocal in their opinions of whether the genetically modified food aid should be accepted or not. Whether one agrees that civil society is effective in implementing policy and political change, it is a factor that must be addressed in order to fully understand decision-making, especially in the developing world.

This chapter will first provide an overview of how this factor fits into the theoretical framework of two-level games. It will then present a short literature review of what civil society is, the various schools of thought on whether it is effective, and then how civil society functions in the developing world. It will then discuss the evidence of whether civil society was effective in influencing the decision, with a specific look at the attempts of civil society to assert influence. Two segments of civil society will be discussed at more length because of their influence in the matter. The two segments are the NGO community and the

scientific community. The chapter will end with a discussion of how well the civil society of Zambia and Malawi aligns with the two-level game theory.

## 5.2 How Civil Society Functions Within Two-level Games

In Putnam's (1988) model, the influence of civil society is a second-stage Level II, domestic activity. It occurs after the state has begun negotiations on Level I when the statesman or domestic negotiator comes back from Level I negotiations with a tentative agreement, subject to approval from the domestic constituency. This domestic factor of Level II cannot be ignored because civil society groups may have the ability to influence what happens should the international negotiations not go the way civil society prefers. This is difficult for several reasons. First, with something as diffuse as civil society, with its variety of associations, a consensus is unlikely to be achieved. This makes applying consistent pressure problematic. Second, civil society may be limited in its effectiveness due to diffuse opinions on the issues at hand. There can be a wide variety of opinions on the matter, not all of them working for the country's good. The third reason has to do with applying pressure. Civil society's ability to apply pressure, even should they agree on what that pressure should be, is limited. This means that civil society, though it might try, would find it difficult to affect the win-sets already established by negotiators in the first stage. In both Zambia and Malawi, civil society was involved in the ratification process, but only inasmuch as the governments of both countries sought advice on whether the genetically modified food aid was safe.

However, the very uncertainty engendered by the unpredictability of civil society may have helped expand the win-sets of Zambia and Malawi because it meant that negotiators on Level I were unable to accurately assess what the win-set was and what the countries would accept. Civil society was also vulnerable to reverberations (Putnam 1988, 454). Reverberation occurs when international entities attempt to sway the domestic audience. In the cases of Zambia and Malawi, reverberation was possible if institutions on Level I either successfully influenced civil society groups to a certain position, or caused certain civil society groups to react negatively to the attempted persuasion. As will be seen, some in both countries were convinced by these attempts, but not all.

## 5.3 What Is Civil Society?

The concept of civil society is a contested one. Some scholars say it has a long history, tracing it back to both Roman and Greek states. Others say that the concept was appreciably different in both form and function and can therefore only be considered to have existed since the late 18th century, when writers like Thomas Paine and Georg Hegel developed the concept of civil society as an entity that is parallel to the state, where citizens form associations according to their wants and needs (Carothers 1999, 18). In her book, *Civil Society and the Aid Industry,* Alison van Rooy traces the history of the concept. Van Rooy posits that Alexis de Tocqueville was referring to civil society when he spoke of a spirit of community, volunteerism and association in the U.S. (Van Rooy 1998, 9). Gramsci viewed civil society as a sphere in which arguments over the

advantages and disadvantages of capitalism can safely take place (Van Rooy 1998, 10, Carothers 1999, 19).

Shin'ichi Yoshida defines it as: "A spontaneous, concerned group of citizens who interact independently of government, while collaborating with it at certain times and opposing it at others." (in Low 1999, 194) This definition seems to preclude organized groups, but has the advantage of conveying the actions of a civil society group. Broman (2002, 1) defines civil society very broadly as existing in the public sphere somewhere between individual citizens and the government (Broman 2002, 1). This definition may be too broad to be of any practical use when actually thinking through civil society and what it can and cannot do. Blaney and Pasha (1993, 3) argue that one must narrow the definition in order to have it mean anything. Instead, they define civil society as "a sphere of social life, involving a stabilization of a system of rights, constituting human beings as individuals, both as citizens in relation to the state and as legal persons in the economy and the sphere of private association." This definition again fails to convey what civil society can actually do. David Holloway defines civil society as: "the self-organization of autonomous groups to balance the power of the state." (Low 1999, 194) Hyden (1997, 5) argues that civil society must be separated from the concept of society. It is not just society, it is that part of society that allows individual citizens to interact with the state and the public realm. For this dissertation, the combination of these definitions comes closest to conveying both what civil society is and what it can do. Civil society is made up of groups that have organized themselves in order to act as a balance against

the state, or to provide services that the state cannot or does not. Into this category fall nongovernmental organizations such as nonprofits, groups of technical experts, unions, ethnic associations, churches, and other groups which have formed outside of the governmental sphere.

### 5.3.1 The Effectiveness of Civil Society

Much like the definition of civil society, the assessments of its effectiveness run the spectrum. Kunz argues that if it is not effective, civil society does not exist: “Civil society is an aggregate of groups and activities, whose presence is measured in its cumulative impact on demolishing autocracy (in Hutchful 1996, 58). Scholars like Carothers (1999) contend that the claims of civil society to foster and strengthen democracy and boost economic success are dubious. Carothers (1999, 27) also claims that reports of civil society having gone global in the form of transnational civil society have yet to be truly proven.

Goran Hyden (1997) argues that claims of effectiveness depend on the school one is coming from. Goran lists four schools of thought: associational, regime, neoliberalism, and post-Marxism. Each school draws its original inspiration from historical thought leaders.

The Associational School is the most dominant among U.S. scholars and originates from the thought of Alexis de Tocqueville. According to this school of thought, civil society strengthens democracy by limiting the power of the state, encouraging political participation amongst private citizens, developing democratic norms, representing interests outside the state, tempering conflict by

showing overlapping interests, training potential political leaders, keeping a questioning eye on democratic institutions, and helping to disseminate information (Hyden 1997, 8-9).

The Regime School draws its origins from John Locke. This school looks closely at how state-society relations can best be managed to foster democracy. Proponents of this school do not separate state and civil society. This school also focuses on how regimes transition and what constitutes good governance (Hyden 1997, 9-10).

The Neoliberal School stands in contrast to the optimism about civil society shown by the Associational and Regime Schools by taking a more cautious approach about what civil society can accomplish by itself. This school is inspired by the writings of Thomas Paine in emphasizing the importance of structural reform, which in turn strengthens private property. This school believes that a liberal economy provides the circumstances under which civil society can thrive, but also believes that economic strength must be supported by political strength in order to survive (Hyden 1997, 10-11).

Finally, the Post-Marxist School also recognizes the influence of social structures formed by the economy while having less emphasis on the importance of structural reforms. Scholars in this school of thought believe that socio-economic status determines the ability to organize and participate, and thus civil society is confined to a select minority that possesses the necessary resources (Hyden 1997, 11-12).

Arthur Brooks (2002) suggests that often opinion on whether civil society

is effective is formed on ideological lines. Brooks argues that for conservatives civil society acts as a means of limiting the size and power of the government by providing services outside of the state and by keeping government accountable. On the other hand, many liberals view civil society as allowing activities and goods that should be provided by the state in unreliable hands (Brooks 2002, 140). Brooks seeks to take out the ideological view by hypothesizing two competing beliefs about civil society. The first is that civil society acts as a corrective to dysfunctional governments. The second hypothesis is that civil society accelerates a dysfunctional government's decline (Brooks 2002, 142). Brooks does not come to a conclusion about which hypothesis is correct, but suggests that answering which is correct through rigorous study is important in the propagation of such civil society entities as nonprofit organizations (Brooks 2002, 143). The work on civil society has continued, but the debate over how civil society functions and whether it is effective remains.

This section has provided an overview of thinking about the effectiveness of civil society. Civil society is a factor that needs to be taken into account because of the possibility of its influence on the workings of the government. Though the definition may be argued over, civil society exists in some form in almost every state, weak and ineffective though it may be. The next section provides a continuation of the debate over civil society's effectiveness by looking at specific cases of how civil society acts in different countries in Africa.

### 5.2.2 Civil Society in Africa

In his article, “The Civil Society Debate in Africa,” Hutchful (1996) asks the question of how the civil society discussion going on in Political Science applies to Africa. Hutchful’s article is a literature review of civil society in Africa and as such argues that civil society does exist in Africa, but that its origins and effectiveness are debated. Hutchful also addresses whether or not the Western specificity of the concept means that it cannot be applied outside the West (Hutchful 1996, 62). Hutchful (1996, 75) concludes that the concept of civil society can be useful in Africa as long as scholars are wary of the fundamental assumptions arriving from its origins in Western thinking. Certainly civil society groups exist in Zambia and Malawi. For this dissertation, care needs to be taken to not apply assumptions of the effectiveness or actions of civil society to the groups in Zambia and Malawi. To do so would be to impose unreasonable standards.

Lewis (2002, 570-571) agrees that civil society has usefulness outside of its Western context and argues that rather than a blanket application of what civil society is and how it functions in the West, one must look for local applications. Makumbe (1998, 306) agrees. Lewis contends that it makes little sense to pretend that civil society’s Western roots mean that it has no use in Africa when colonialism was such a large part of African history, and civil society was used as an organizing principle in colonial administrations (2002, 580). One of the reasons for choosing to use Zambia and Malawi as case studies was their history as British colonies. It is difficult to trace or prove that this shared colonial history

was the reason Zambia and Malawi reflect similar civil societies, but it is helpful when comparing the countries that their civil societies seem to function in the same manner, i.e., with a somewhat limited degree of effectiveness.

Stephen Orvis (2001) also agrees that the concept of civil society has usefulness for Africa. Orvis believes that part of the debate over civil society in Africa has been that it has been defined too narrowly and had too many expectations put on it. This has led to claims of ineffectiveness where they need not have been made (Orvis 2001, 17). He contends that looking at the full spectrum of what can be considered civil society allows a different picture to emerge. Institutions and concepts like patron-client networks, traditional authorities and ethnic associations must also be addressed (Orvis 2001, 27-33). Makumbe (1998, 309-310) very briefly lists examples of the effects of civil society in Africa, such as the struggle for the end of Apartheid in South Africa, the successful formation of Zambia's Movement for Multiparty Democracy, the rejection of the one-party system in Malawi, and the overthrow of Zaire's Mobuto Sese Seko by Kabila, supported by various civic groups in the country.

#### 5.2.2.1 *Specific cases of civil society in Africa*

The literature on civil society in Africa is not always about its successes. Giles Mohan (2002) critiques major lenders and development agencies' emphasis on the development of civil society in the 1990s by looking at how NGO intervention failed in Ghana. Mohan argues that while civil society is ostensibly separate from the government, this ignores reciprocal relationships

individual organizations maintain with the government, which may influence their actions (Mohan 2002, 128-129). Mohan (2002, 146-148) concludes that the concept of civil society, especially in the form of foreign NGOs, has meant that the civil society in places like Ghana are in no way independent and in fact have become instruments of Western idealism and ideas, ideas that often do not work outside of the West. This theory is interesting in light of the scientific communities of Zambia and Malawi described in this chapter. Some of the scientists were independent, but some were also used by the government to bolster their argument. Scientific independence becomes difficult when funding comes from the government, and oftentimes in the developing world the government is the only available funder, whether of universities or of research stations.

Botswana is an example of how a uniquely African civil society can influence the course of democracy. In their article, "Developing Democracy when Civil Society is Weak: The Case of Botswana," Molutsi and Holm (1990) point out that the history of Botswana precluded the development of traditional, Western notions of civil society. Instead, Botswana's democracy has benefitted from village-based participatory institutions. These institutions started in the early nineteenth century and were traditionally a place where village males could gather in a meeting called a *kgotla* in order to raise and debate issues with the chief of the tribe or local headman. *Kgotlas* remain nonpartisan in that party activists are not allowed to organize who speaks or which issues are raised. These meetings remain outside government control, but are a powerful way for

citizens to have their voices heard. This in turn strengthens Botswana's democracy (Molutsi and Holm 1990, 324-328).

Peter VonDoepp explores how civil society can help with political transition in his 1996 article by looking at the cases of Kenya and Zambia in the late 1980s and early 1990s. VonDoepp (1996, 25) contends that it was civil society that made the difference in the success of the political transitions. VonDoepp looks at what makes civil society an effective element of change and concludes that there are three factors. The first is the structural basis of civil society in the country. Zambia, whose transition was more successful than Kenya's, had a strong base of labor unions. This allowed them to have more influence when it came time to make change. The second factor, the institutional strength of the constituent elements of civil society, is closely related to the first factor. This factor has to do with the degree of autonomy and the available resources a civil society entity has. The third factor is the cultural presence of civil society, in other words, how deeply rooted the organization or association is in the culture of the country (VonDoepp 1996, 40-42). There were many factors that went into Zambia's successful transition from a one-party to a multiparty democracy, but the existence of these three factors meant that the transition succeeded more thoroughly than Kenya's.

Another example of how civil society can intervene in the workings of a country and help in transition is perhaps one of the most famous to come out of Africa: the end of apartheid in South Africa. The extent of civil society's influence in ending apartheid is hotly debated. Daryl Glaser (1997) argues that there was

some influence, but one must not exaggerate how much of an effect civil society had in ending apartheid. Glaser (1997, 5) argues that one can stretch civil society beyond its actual influence by looking at it as a watchdog for all things democratic. Treating civil society as though it is a monolith ignores the reality. However, in South Africa there were elements that contributed to the end of apartheid. The first was the labor movement, which initiated discussions about a democratic transition. The second element of civil society that had an impact in Glaser's opinion was the civic movement within townships. This led to the formation of more civil society organizations (Glaser 1997, 6).

One final article speaks directly to the relationship between NGOs and GMOs. The first is an article by Matthew Harsh titled, "Nongovernmental Organizations and Genetically Modified Crops in Kenya: Understanding Influence Within a Techno-Civil Society." In the article, Harsh (2014) studies the influence of NGOs on the adoption of GM technology. Harsh argues that certain NGOs in Kenya have successfully helped the acceptance of GM technology because of two ideologies. The first is that advancement of technology is correlated with societal progress, and the second is that civil society is a necessary component of an informed and representative democracy (Harsh 2014, 172). Harsh terms the confluence of these two ideologies as a techno-civil society. This is important because in 2002 such a civil society did not exist in either Zambia or Malawi, but the experience of Kenya points out the ways that civil society could successfully influence acceptance or rejection of GMOs.

Both the definition and effectiveness of civil society may be argued about,

but the prevalence of civil society organizations means that it must be addressed in any discussion of Level II domestic influences. The next section will look at what happened with civil society in Zambia and Malawi during the 2002 decision.

## 5.4 Evidence

In the cases of Zambia and Malawi, pressure from civil society took just one form—advocacy for a certain position. This makes sense in light of the fact that civil society entities cannot vote and often do not have any economic clout with which to pressure a government into doing what they want.

This section first explores the activities of the two major civil society players, NGOs and the scientific community. These two particular groups were chosen because of their prominence in the debate. The section then discusses the advocacy by these groups in Zambia and Malawi. The advocacy of the civil society groups fits into four broad categories: the fact that people were starving from lack of food, concerns about health should the food be accepted, concerns about the effects of genetically modified seeds on the ecosystem and the lack of knowledge about the effects of genetically modified foods.

### 5.4.1 NGOs

In 2002 there were two major civil society groups in both countries trying to apply pressure to the government for their position, NGOs, both international and local, and the scientific community. The scientific community was much less organized than the NGO community, but their influence was important

nonetheless.

NGOs went about advocating in different ways, and the sources of their information varied. In Zambia, the Consumers International Regional Director came out strongly in favor of the government's decision to reject the food aid.[64] After repeated assurances from President Mwanawasa that the genetically modified food aid was poisonous but that Zambia did not need it anyway, NGOs and other associations started coming out for or against GMOs. Emily Sikazwe, Executive Director of the NGO Women for Change, called President Mwanawasa irresponsible, saying, "We shall not allow the president to take us for granted. The president should be responsible to the people as they are his employers."[65] The Forum for Democracy and Development pushed for its acceptance, with the national chairman pointing out that rejecting the food was not doing anyone any favors.[66]

Other groups accused President Mwanawasa of not understanding or of willfully ignoring the situation. An aid worker at the time, who asked to be anonymous, commented, "I don't think the government is particularly well informed on the extent of the food shortages. I don't think [the GM issue is] a diabolical plot to withhold food by the government, I think it's just blundering."[67] Care International, an NGO on the ground in 2002, pointed out the severity of the

---

[64] Staff Reporter, "We'll Stay Put on GMOs," *Times of Zambia*, November 20, 2002. http://allafrica.com/stories/200211200055.html (accessed August 17, 2017)
[65] David Simpson, "President Draws Fire," *BusinessDay*, January 6, 2003. http://allafrica.com/stories/200301060357.html (accessed August 17, 2017)
[66] Brighton Phiri, "U.S. Comes Under Attack Over GMOs," *The Post,* August 13, 2002. http://allafrica.com/stories/200208130100.html (accessed August 18, 2017)
[67] Staff Reporter, "Mwanawasa Cracks Down Over Food Crisis", *IRIN*, October 9, 2002. http://allafrica.com/stories/200210090438.html (accessed August 16, 2017).

problem: “The hunger situation is real, a few months ago people had a bit of food but they are now running out of food creating a very desperate situation.”[68]

Some groups were not necessarily opposed to letting the food in, but were concerned about the lack of legal framework in place. Without that framework, it would be difficult to regulate what came into the country, how much, and when. The Zambian National Farmers Union (ZNFU) was particularly vocal about the need for regulation. The ZNFU held a meeting in which they discussed GMOs and the need for legislation. The other conclusions from the meeting were that if the government decided to accept the maize, all of it must be tested for all GMO varieties, and that Zambia should only accept and distribute varieties that were fit for human consumption.[69] In addition, the ZNFU urged that the grain be milled before it was distributed.[70]

Similar advocacy was happening in Malawi. Tamani Nkhono-Mvula worked for CISANET, a civil society agricultural network. Because they had access to many farmers’ associations, they were able to conduct gatherings they called People’s Voices. In these gatherings they would educate people on what little they knew of genetically modified foods. CISANET was in favor of accepting the food aid, but found that there was a lot of misinformation floating around about them. He saw one of CISANET’s functions as educating people, though he did not feel they had all the information they needed.[71]

---

[68] Sheikh Chifuwe, “People are Genuinely Starving- Cupper, *The Post,* November 18, 2002. http://allafrica.com/stories/200211180242.html (accessed August 16, 2017)
[69] This was a moot point, as the U.S. never delivered food aid that was not fit for human consumption.
[70] Brighton Phiri and Joe Kaunda, “Don’t Allow GM Maize in Absence of Policy,” *The Post*, October 16, 2002. http://allafrica.com/stories/200210160640.html (accessed August 17, 2017)
[71] Tamani Nkhono-Mvula, Personal Interview, August 16, 2016, Lilongwe, Malawi.

In 2002 Dr. Kingdom Kwapata was the head of the Malawi Human Rights Network. He was on the frontlines of pressuring the Malawian government to accept the genetically modified food aid. According to Dr. Kwapata there was a lack of understanding about the issues. When asked who was giving pressure to the government he replied: "Civil society organizations. One of the pressure groups, and generally, the majority of people didn't really understand. So my role in that context was that I was at the forefront of advocacy to, you know, urge the government to accept the maize on humanitarian grounds."[72]

Dr. Wilkson Makumba, head of the Chitedze Research Station, agreed that civil society organizations were trying to pressure the Malawian government, but argued that they were not necessarily successful and were uninformed:

> …of course sometimes we have unnecessary comments that come from civil society organizations, but they are not the things that can make the government bow down. But rather, you know, because the government actually has technical advisors, ok? And sometimes the people that are anti are not in this country. They would go and consult the wrong person on issues of agriculture.[73]

Some in Malawi felt that some NGOs were too aggressive in their advocacy. Dr. Yanira Ntupanyama, then the Chief Environmental Officer in the Ministry of the Environment, specifically referenced the Consumer Association of Malawi, which was opposed to bringing the food in. According to Dr. Ntupanyama: "We've always had problems with the Consumer Association of Malawi. Very assertive, very aggressive in addressing issues of food safety. So as much as possible they would love people to bring in things that they are so

---

[72] Kingdom Kwapata, Personal Interview, August 12, 2016, Lilongwe, Malawi.
[73] Wilkson Makumba, Personal Intervew, August 16, 2016, Chitedze Research Station, Lilongwe, Malawi.

sure that it's safe."[74]

### 5.4.2 The Scientific Community

Olive, Gunasekara, and Raymond (2012, 642) argue that states who hold certain normative beliefs related to science operate on a "precautionary principle." This principle encourages regulatory action even while the science remains uncertain because of possible consequences that could result from as yet unknown risks. This principle can be seen in how the EU has responded to genetically modified foods and in their insistence that others follow their lead. In Zambia and Malawi scientists who did not want to accept the genetically modified food aid repeatedly invoked the precautionary principle. As Richard Chanda, a scientist working in seed certification said of the decision-making process in Zambia: "We need to apply precaution…implying that it was not a definite no, nor a definite yes, but precautions can only be done when the person has accepted that all issues he has raised have been cleared. If they haven't been cleared, he will not."[75] Dr. Mwananyanda Mbikusita-Lewanika pointed out that applying the precautionary principle was especially important where there was still no consensus amongst scientists. As Dr. Lewanika said, "The precautionary principle requires that care be taken, even if a direct cause and effect relationship between an activity and harm to human and animal health, including the environment has yet to be established scientifically."[76]

---

[74] Yanira Ntupanyama, Personal Interview, August 17,2016, Lilongwe, Malawi.
[75] Richard Chanda, Personal Interview, August 23, 2016, Lusaka, Zambia.
[76] Brighton Phiri, "U.S. Comes Under Attack Over GMOs," *The Post,* August 13, 2002. http://allafrica.com/stories/200208130100.html (accessed August 15, 2017)

Scientists in both countries worked to convince people of their position and were looked to as a neutral source. Tamani Mvula-Nkhono stated:

> Yes, so, as you said there was little knowledge, but the thing is, because there were people who were hearing convincing arguments from both sides, from the pro-GMO and also the anti-GMO. All sides were putting forth cases that made sense. So for us we needed to go for people we felt could be neutral, and that was the university. So the university at that time, most of them were pro-GMO.[77]

Even without consensus, scientists were looked to as a source of whether genetically modified food would be acceptable. Scientists, NGOs, and other groups all worked to have influence. Their objections or support follow.

### 5.4.3 Risks of Starvation

The first broad category civil society used to put forth their argument for accepting the genetically modified food aid was that people were in danger of or were actually starving, and that denying the food aid would greatly exacerbate the problem. Indeed, according to a risk assessment report conducted by the WFP and FAO, in Malawi, people had already starved to death by June of 2002.[78] This made the problem more pressing as there was no sign it was going to get better during the summer of 2002.

As discussed earlier, President Mwanawasa had come under fire for denying the severity of the situation in Zambia. Protests over what was happening came from many different segments of civil society, including tribal chiefs worried about their people, churches, NGOs, and others.

---

[77] Tamani Mvula-Nkhono, Personal Interview, August 16, 2016, Lilongwe, Malawi.
[78] FAO, "Special Report: FAO/WFP Crop and Food Supply Assessment Mission to Malawi," May 29, 2002. http://www.fao.org/docrep/005/y6811e/y6811e00.htm (accessed November 4, 2017)

While urging caution about the safety of GMOs, tribal chiefs, the traditional rulers of Zambia, were still concerned for their people. Chief Chikanta of the Kalomo district wanted the country to consult professionals in order to make as informed a decision as possible, but had this to say about the urgency of the situation on the ground: "Our communities are on the verge of death. There is no need for this debate to take two weeks at the expense of dying Zambians."[79] Chief Macha of the Tonga people in the Choma district also expressed concern about the situation of his people, asking the government to reconsider its stance on accepting the genetically modified food aid.[80]

In November of 2002, after the Zambian government had made the decision to reject the food aid, a counsel of the tribal chiefs was held, with a presentation on the decision by the Minister of Agriculture, Mundia Sikatana. Minister Sikatana was an outspoken supporter of the decision to reject the food aid and argued that it was what was best for Zambians. The tribal chiefs were not quite as convinced. In a statement after the meeting they made a strong statement, saying, “What their Royal Highnesses simply want on food security is action, not words. Their Royal Highnesses expect your government not to let people die from hunger as a result of your policies.” They went on to say that, “Policies that seek to put the security of people in danger are not what their Royal Highnesses expect from your government.”[81]

---

[79] Brighton Phiri, “U.S. Comes Under Attack Over GMOs,” *The Post,* August 13, 2002. http://allafrica.com/stories/200208130100.html (accessed August 16, 2017)
[80] David Simpson, ”President Draws Fire,” *BusinessDay*, January 6, 2003. http://allafrica.com/stories/200301060357.html (accessed August 17, 2017)
[81] Brighton Phiri, “WFC Response to Mwanawasa,” *The Post,* November 6, 2002. http://allafrica.com/stories/200211060373.html (accessed August 10, 2017)

Care International was trying to provide food for people in very difficult circumstances. The national director issued a statement about what they were seeing on the ground, saying that, “There is serious food insecurity at the household level, we don't have a consistent food supply. People are very, very hungry, in critical areas people are eating once a day."[82]

In Zambia there was a lot of concern expressed about what was going on, but civil society groups were also trying to do something about the situation. As just expressed, Care International was seeking to feed people. The churches in Zambia and Malawi, and indeed all over Africa were also concerned about what was going on. The All Africa Conference of Churches sent out an appeal for humanitarian assistance, saying in a statement:

> We, the 168 member churches of the All Africa Conference of Churches (AACC) as a continental ecumenical body wish to add our voice to one of the most severe and widespread hunger now facing most African countries. People are dying daily. Most of those alive are too weak to produce more food. The animals are being wiped out.[83]

As stated earlier, hundreds had already starved in Malawi by June of 2002. In addition to starvation, the country was facing a cholera epidemic in which thousands would eventually die (Attwell 2013, 564). This meant that the situation was more urgent in Malawi than in Zambia because they had fewer reserves and fewer resources to turn to.

Similar activities were happening in Malawi at the same time. They were

---

[82] Sheikh Chifuwe, “People are Genuinely Starving- Cupper, *The Post,* November 18, 2002. http://allafrica.com/stories/200211180242.html (accessed August 16, 2017)
[83] Osman Njuguna, “Massive Starvation: Churches Send Out Urgent Appeal,” *African Church Information Servicer,* February 3, 2003. http://allafrica.com/stories/200301310644.html (accessed August 14, 2017)

in a different position because ultimately their government decided to accept the food, providing that it be milled before entering the country, but before the decision was made there were similar appeals being made about the number of people suffering from a lack of food. When asked why the Malawian government was convinced, Kingdom Kwapata then of the Human Rights Network answered: "Political pressure as well from the grassroots. People were really in need of the maize. Yeah, so that pressure was significant. In addition, to maybe institutions like mine that were involved, they came to a decision that, let's accept this."[84] Tamani Mvula-Nkhono also felt that his organization, CISANET, had an impact:

> This food, the GM food at that time, we accepted it on moral grounds, people were dying. We have maize others have given which we don't have evidence that some have died because of it. The choice that we have is let them do it so that they survive at least for one year. Let them not die of hunger. So it was on that moral basis that it was accepted.[85]

The appeals that were effective in Malawi failed in Zambia. Civil society was active in both countries. However, as will be seen, there were other appeals given by top officials against accepting the food that held more sway in Zambia, such as the health of the people who eat GMOs, concerns about the damage to the ecosystem, and the lack of good information on whether GMOs would do more harm than good.

### 5.4.4 Health Concerns

Concerns about people starving were real and held sway in Malawi, but in Zambia concerns about the damage to people's health was also a powerful

[84] Kingdom Kwapata, Personal Interview, August 12, 2016, Lilongwe, Malawi.
[85] Tamani Nkhono-Mvula, Personal Interview, August 16, 2016, Lilongwe, Malawi.

argument. Unfortunately, many of the concerns going around were less than true, and sometimes completely unproven. Nevertheless, people were genuinely fearful that eating genetically modified food would harm them. Because this issue was largely about public opinion, the specific fears about genetically modified food will be covered more thoroughly in Chapter 6. This section is about the information being spread by members of civil society, specifically the scientists.

At the University of Zambia (UNZA), molecular biologist Kazhila Chinsembu was a prominent critic of genetically modified food. He warned that genetically modified foods could suppress the immune system. Dr. Chinsembu pointed out that this was especially concerning in an area where HIV/AIDS was so prevalent. In an interview with The Post newspaper Dr. Chinsembu also expressed his concern about antibiotics, saying, "These foods could contribute to bacteria becoming resistant to anti-biotics so that you need to use higher dosages of anti-biotics to get cured. There are also reports that it suppresses the immune system of the body."[86]

In a report to the Zambian government, National Institute of Scientific and Industrial Research researcher Dr. Mwnanayanda Mbikusita-Lewanika, who was part of the team that would eventually go to the U.S. to study GMOs, recommended that the government stop any more import of genetically modified foods. Dr. Lewanika's report was based on his work with the Ministry of Agriculture. In the report he also reiterated the claim of antibiotic resistance, and

[86] Brighton Phiri and Webster Malido, "Government is Undecided Over GM Maize," *The Post,* July 26, 2002 http://allafrica.com/stories/200207260327.html (accessed August 15, 2017)

also talked about the increased risk of cancer from eating genetically modified food.[87] Once Dr. Lewanika had gone to the U.S. he came back and reiterated his former concerns. He also added that there was evidence the genetically modified food tended to make nonallergenic foods become allergenic due to the presence of foreign genes. This would cause more problems with people's health.[88]

In a lengthy article for The Post in Zambia, Dr. Luke Mumba, then Dean of the School of Natural Sciences at UNZA, wrote about some of the beliefs that were going around in regard to health. About food safety concerns, Dr. Mumba said:

> So far there is not a shred of evidence to suggest that eating GM food will be bad for anyone's health. To be more specific there is no experimental data so far to prove that GM foods cause allergies, anti-biotic resistance or suppression of immune systems in human bodies. These are but some of the common myths…[89]

Dr. Mumba went on to explain that millions of people have been eating genetically modified food for years with no deleterious effects and that it was unreasonable to assume something different would happen to Africans. Dr. Mumba specifically cited a study in Ireland of genetically modified potatoes where after six years no negative effects were seen. Dr. Mumba contended that food safety depends on what a food contains, not how it was produced, so non-nutritional elements, toxins, and other substances that might cause allergies

---

[87] Brighton Phiri, "U.S. Comes Under Attack Over GMOs," *The Post,* August 13, 2002. http://allafrica.com/stories/200208130100.html (accessed August 18, 2017)
[88] Staff Reporter, "Genetically Modified Organisms a Health Hazard- Report, *Times of Zambia,* December 6, 2002. http://allafrica.com/stories/200212060258.html (accessed August 14, 2017)
[89] Luke Mumba, "Safety of GMOs," *The Post*, July 29, 2002. http://allafrica.com/stories/200207290123.html (accessed August 16, 2017)

would be there regardless of the food's origin.[90]

Dr. Wilkson Makumba in Malawi also had concerns about what the food would do to people's health. He recalled some research he heard about in his work:

> And some research of course, it has even shown that like, where they have used the guinea, you know? The guinea pigs, they have shown that of course they have developed some tumors after feeding with it. Yeah, so we're looking at that, saying, we might be having those. And the side effects on people. But we are still waiting for it, you know, the actual conclusive work or scientific proof that it did it.[91]

Other members of civil society were concerned about people's health, but in the opposite direction. Kingdom Kwapata, then head of the Human Rights Network which was advocating that the food be accepted in Malawi was concerned about what would happen if people did not get the food:

> So as I was advocating government should accept this on the basis that, you know assuming that this maize is poisonous and people die, right? And then you have two options- you either accept the maize and people die if it's poisonous, or you reject the maize, people still die because of hunger. So I was saying, either way, just bring it in. If we all perish, then that's fine! As opposed to, you know, withholding it, because you're fearing the consequence. Yeah, so, I think our advocacy worked very well during that time.[92]

Concerns about what genetically modified food would do to people's health were all over, in the media, and in traditional beliefs. Most groups in Zambian civil society, especially scientists, were concerned about the harmful effects of the food, though some still advocated for its acceptance. Groups in

---

[90] Luke Mumba, "Safety of GMOs," *The Post*, July 29, 2002. http://allafrica.com/stories/200207290123.html (accessed August 16, 2017)

[91] Wilkson Makumba, Personal Intervew, August 16, 2016, Chitedze Research Station, Lilongwe, Malawi.

[92] Kingdom Kwapata, Personal Interview, August 12, 2016, Lilongwe, Malawi.

Malawi were also concerned about the harmful effects but felt that the harmful effects of starvation were more important to worry about.

### 5.4.5 The Ecosystem

In addition to health concerns, many in civil society expressed worry that allowing GMOs into the country would irreparably harm the ecosystem and thus disrupt the agricultural sector. There were a number of fears, including disruptions to the informal seed sector, dependency on pesticides, cross-breeding, and a subsequent destruction of farming.

Bernadette Lubozhya, an agro-scientist, had two worries about bringing in GMOs. The first was that the informal seed sector, which at the time supplied 85% of the seed to most of the farming community in Zambia would be negatively impacted by the genetically modified seed imported into the country.[93] The Southern African Development Community (SADC) had much the same concern. In addition to harming the informal seed sector, SADC feared that bringing in the genetically modified grain would result in the extinction of indigenous seeds. According to Charles Nkomo, the Director of the SADC Plant Genetic Resource Center, cross-pollination would lead to the destruction of the indigenous varieties. Mr. Nkomo feared that the genetically modified seed would overwhelm the nongenetically modified seed.[94]

There was another fear about genetically modified seeds. This was the

---

[93] Bivan Saluseki, "Lusaka Shouldn't Be Pushed Into Accepting GMOs," *The Post*, July 31, 2002. http://allafrica.com/stories/200207310099.html (accessed August 14, 2017)
[94] Takaitei Bote, "Genetic Modification Poses a Threat to Indigenous Seeds," *The Daily News*, October 4, 2002. http://allafrica.com/stories/200210040219.html (accessed August 15, 2017)

belief that the genetically modified seeds had been bred in such a manner that they were more dependent on pesticides.[95] This was a major concern in countries where farmers could barely afford seed. Adding the expense of chemical pesticides that could only be purchased from a Western company would have been disastrous for the private agriculture sector of both countries.

For all of these concerns there was an obvious if expensive option: have the grain milled before it ever got to the country so that no one could plant it and it would not disturb the ecosystem. This was the option that Malawi took. As Madalitso Mwale, Deputy Director of the Department of Disaster Management Affairs said when asked about the danger of Malawians planting the seed,

> …That would be dangerous and would affect the varieties of maize, and that would bring problems. So on the basis most people said, if we are to accept GMO maize then it has to be milled at the point of entry so it comes here as flour… But this time around as a control measure, it was indicated that if we are to accept the GMO maize, then it has to be milled.[96]

Wilkson Makumba and Yanira Ntupanyama, both scientists in Malawi, expressed the same fears, that people would ignore the prohibitions against planting the genetically modified seed. As Dr. Ntupanyama said:

> Knowing that I think the main concern was that even myself or even my grandmother, if she sees the seed and thinks, oh this seed looks unique and she would try to plant it. So the concern was that someone in the village or someone who was interested in crops would decide to plant it. So if they plant it, then what next? I think at that time we struggled with issues that bringing genetically modified seeds or crop into the country might end up having problems that other countries in Canada, farmers have had problems with Monsanto, where you find some of the genes in farmers' land and then people start questioning, so where did you get

---

[95] Bivan Saluseki, "Lusaka Shouldn't Be Pushed Into Accepting GMOs," *The Post*, July 31, 2002. http://allafrica.com/stories/200207310099.html (accessed August 14, 2017)
[96] Madalitso Mwale, Personal Interview, August 11, 2016, Lilongwe, Malawi

this?[97]

However, Zambia still felt that the other concerns were too great to ignore. Instead, scientists in Zambia and other parts of Southern Africa began to look for alternative technologies that would increase yield without using genetic modification. Instead of genetic modification, farmers were encouraged to use old techniques such as tissue culture to produce more food.[98]

### 5.4.6 Lack of Information

One of the biggest concerns expressed by civil society groups, especially those urging caution in accepting the food, was that they simply did not have enough information to make an informed decision. Some claimed that there was enough information, but from the research conducted, they were in the minority. A Zambian scientist, Dr. Mulenga, issued a statement before the debate had truly started in Zambia. In April of 2002, Dr. Mulenga said, "I cannot say eat or don't eat GM maize, but what is saddening is that these long term effects of GM crops are not officially known even though scientific indications are there to show that they exist."[99] In July of that year, UNZA molecular Biologist Dr. Chinsembu argued that research conducted outside of the country was insufficient. Dr. Chinsembu said, "We need to conduct it here in Zambia so that scientists like myself can come in. Although we are very few molecular biologists in Zambia, at

---

[97] Yanira Ntupanyama, Personal Interview, August 17,2016, Lilongwe, Malawi.
[98] Takaitei Bote, Governments, Scientists Seek Alternative to GM Technologies," *The Daily News,* October 10, 2002. http://allafrica.com/stories/200210100753.html (accessed August 16, 2017)
[99] Brighton Phiri, "Lusaka Has No Laboratory to Detect GM Products," *The Post,* April 24, 2002. http://allafrica.com/stories/200204240437.html (accessed August 15, 2017)

least we can help in this matter because the risk assessment should help us understand whether the GM maize can lead to bio-diversity loss or not."[100] Another Zambian agronomist said that the bottom line was that, "we need ot know more, and we can't take chances. If even the Europeans, with all their scientists and research institutions, have doubts, surely there must be good reason to be cautious." (in Cooke and Downie 2010, 6)

Dr. Luke Mumba disagreed with other scientists' assessments of the lack of knowledge. In his article in The Post Dr. Mumba articulated his reasons for believing in the safety of GMOs. He argued that genetically foods were rigorously tested to ensure that they are safe to eat before they are distributed. He pointed out the number of countries that have national biosafety laws in place to ensure the safety of the food. Dr. Mumba also disputed the claim that genetically modified food caused immune system repression, saying:

> …findings of a Royal Commission which was set up to investigate the validity of the claims that GM foods suppress the immune system concluded that "the evidence by Dr Pusztai to indicate that rats had depressed immune system was not the result of standard immune response tests." The report further states that "within the scientific community there is general agreement that the results of Dr. Pusztai's experiment are inclusive insofar as there were flaws in the process, and the project was incomplete."[101]

In an effort to combat this lack of knowledge in Zambia, President Mwanawasa decided in September of 2002, after the decision to reject the genetically modified food aid had been made, to send a team of scientists to the

---

[100] Brighton Phiri and Webster Malido, "Government is Undecided Over GM Maize," *The Post,* July 26, 2002 http://allafrica.com/stories/200207260327.html (accessed August 15, 2017)
[101] Luke Mumba, "Safety of GMOs," *The Post*, July 29, 2002. http://allafrica.com/stories/200207290123.html (accessed August 16, 2017)

U.S. and EU on a fact-finding mission.[102] The U.S. had already offered this option to Zambians, and President Mwanawasa took advantage of it. Speaking about the government's position, he urged that his government not be misunderstood because there was no consensus amongst scientists, and that Zambia was simply taking precautionary measures. He stated that, "It's not government's intention to sacrifice the lives of Zambians by rejecting GM maize."[103]

The debate over whether GMOs were safe raged in Zambia throughout the autumn of 2002. As previously mentioned, WHO issued a report in November that stated that there GMOs posed no risk to human health.[104] This failed to sway most scientists. In Zambia, tempers began to flare. At a biotechnology conference held in November in Lusaka, pro-GMO scientists accused anti-GMO scientists of misleading consumers. One scientist, Jocelyn Websteran, accused the conference's organizers of creating a conference full of bias and bad information.[105]

Some churches also weighed in on the debate, saying that the lack of full information about the consequences of genetically modified food amounted to treating Africans as guinea pigs in genetic research. A senior pastor at the Gospel Lighthouse Church in Kenya said, "The repercussions of these foods

---

[102] Brighton Phiri, "Government Allows GM Food Aid for Refugees," *The Post,* September 9, 2002. http://allafrica.com/stories/200209090178.html (accessed August 16, 2017)
[103] Webster Malido, "Africa is Experiencing a Catastrophe," *The Post,* September 15, 2002. http://allafrica.com/stories/200209161314.html (accessed August 17, 2017)
[104] Staff Reporter, "Zambia: We'll Stay Put on GMOs," *Times of Zambia*, November 20, 2002. http://allafrica.com/stories/200211200055.html (accessed August 16, 2017)
[105] Staff Reporter, "Anti-GMO Scientists Accused of Bias as Tempers Flare at Bio-Tech Conference," *Times of Zambia*, November 21, 2002. http://allafrica.com/stories/200211210072.html (accessed August 15, 2017)

have not yet been established... The Church has a responsibility of investigating until it is satisfied that people using GM foods are protected from destruction." He went on to say that it is the responsibility of the church to guard against injustices: "When you manufacture a product with the intention of gaining at the expense of other people's health simply because they are hungry and poor, and do not have the machinery to verify the safety of your products, this is injustice."[106]

Because they made the decision relatively early on to accept genetically modified food that had first been milled, the civil society debate in Malawi over how much was known about GMOs was not as fierce, though questions still arose. Tamani Mvula-Nkhono expressed the debate in Malawi well:

> So the people from Bunda [a technical college] were of the view that there is no problem with these things. Whatever is being said is just politics and not necessarily that if there could be challenges, fine, maybe in the long run, but the choice is there: eat this food and be alive, or die of hunger. So that was the choice that people were being faced with. So at CISANET it was difficult for us to stand and say, we don't want this, because in the country there was very little knowledge, and the experts are saying it's ok. So we didn't have a good basis of saying no, though we had organizations like ActionAid and other, Oxfam, and other NGOs who were opposing this thing.[107]

Dr. Wilkson Makumba and Dr. Kingdom Kwapata agreed that scientifically it had not been conclusively proven, and so caution was needed in accepting the food and that there was no expertise in the country that would allow them to

---

[106] Staff Reporter, "Are Africans Guinea Pigs in Genetic Research," *African Church Information Service,* January 27, 2003 http://allafrica.com/stories/200301290746.html (accessed August 17, 2017)

[107] Tamani Nkhono-Mvula, Personal Interview, August 16, 2016, Lilongwe, Malawi.

make a fully informed decision.[108]

In the matter of knowledge, civil society, especially the scientific community, worked against itself. There were so many voices saying that there was not enough knowledge that those who were saying that the information was there for the taking were not listened to.

## 5.5 Conclusion

This chapter has sought to explain the first Level II domestic factor's influence, that of civil society. First, the literature about civil society was explored, specifically the differing definitions of the concept. This leads to an understanding of how civil society is used in this dissertation. Specific assessments of how civil society has worked, especially in Africa, led to an idea of how civil society may have influenced the decisions in Zambia and Malawi. Next, the chapter discussed the positions and actions of different NGOs in Zambia and Malawi in order to understand how they tried to exert influence over the decision. The next segment of civil society discussed was the scientific community. Here confusion reigned, as different scientists, many of them prominent, advocated for their version of what the science was. In Zambia a group of scientists was sent to the U.S. and the EU to learn more about GMOs before making their recommendation. However, the decision was made before the scientists concluded their trip and made their report. In Malawi the concerns of the scientific community were overridden by other concerns.

---

[108] Kingdom Kwapata, Personal Interview, August 12, 2016, Lilongwe, Malawi; see also Wilkson Makumba, Personal Intervew, August 16, 2016, Chitedze Research Station, Lilongwe, Malawi.

Both NGOs and scientists raised some of the same concerns in both countries. The first was a concern that without the genetically modified food aid being offered, people would starve to death. The next major concern was that if the food aid was accepted, people's health would be at risk from eating it. The third concern was that if the food was accepted and farmer chose to plant it against all recommendations, the ecosystems of the countries would be permanently affected. The final reflects the reason civil society does not seem to have been more influential: groups in both countries felt they simply did not have enough information.

Influence is difficult to assess, especially when so many different positions were being put forth. However, the sheer amount of opinion being propagated means that civil society was an element of the domestic that had to be considered and dealt with in both countries. The issue remains the one mentioned in the beginning of the chapter—did either country's civil society have enough power to sway the government's decision? Another relevant question is whether any institution on Level I was able to successfully influence groups on Level II. The evidence for this is mixed, though certainly the influence of the EU's position was felt. As in Chapter 4, this can be seen as passive, indirect persuasion, but the evidence points to it having had an effect. This served to narrow the win-set of both Zambia and Malawi.

Though civil society is a Level II factor that could have had influence, the evidence points to a mixed record of influence. The influence of civil society on the decision is in doubt because of the confusion that reigned in the positions of

both NGOs and the scientific community. There was some influence, and Zambia did go with the recommendation of the panel of scientists who went abroad to study the subject, but because that report did not come until after Zambia had made the decision to reject the genetically modified food aid, one cannot say that it was an influence in the decision. Both countries had other domestic concerns with accepting the food aid, which will be discussed in the next chapter.

# CHAPTER 6

# LEVEL II: INTERNAL CONSIDERATIONS

## 6.1 Introduction

Internal considerations are the second domestic factor on Level II that are hypothesized to have played a role in Zambia and Malawi's decision to accept or reject the genetically modified food aid. This chapter discusses aspects that Putnam (1988, 432) mentions when defining domestic politics, including political parties, legislators, and public opinion. There were many issues that came to the fore during this time of crisis. One was that neither country was prepared with biosafety legislation that would allow them to regulate what came into the country and what was done with GMOs once they were in the country. Another concern for the Zambian government was that members of opposition parties, some of them prominent politicians, were critical of both the government's decision and how it handled the crisis. Public opinion about what the genetically modified seed and food would actually do was confused and diffuse, leading to uncertainty about which decision the countries would make. And finally, Malawi's domestic position was much worse and changed their considerations, thus playing a greater role in their decision.

This chapter first discusses how this factor functions within two-level games. Following that is a literature review of domestic considerations, including the concept of “audience costs” and public opinion. In the evidence section, four considerations will be looked at: lack of legislation, public opinion, intragovernmental opposition and the domestic position of the countries.

## 6.2 How Internal Considerations Function Within Two-level Games

Internal considerations are the second domestic factor on Level II in this two-level game model. Along with civil society, internal considerations are a second stage, Level II activity, occurring after negotiations have begun on Level I. Like civil society, internal considerations must be taken into account because if they are important enough they have the power to derail negotiations with the international level by making acceptance of the proposed stage one deal unacceptable or impossible. Internal considerations may also restrict the size of the win-set for a country by making deals that do not take into account these internal constraints impossible to ratify.

Internal considerations are especially important because they may be the hardest for negotiators on Level I to understand. This is in part due to the diversity of opinions and the number of considerations that need to be taken into account when negotiating with Level I institutions. Unlike civil society groups, something like public opinion is unlikely to generate enough cohesiveness for officials to be able to predict which way the public will turn. This means that influencing public opinion by Level I negotiators may be attempted, but is

particularly subject to reverberation because of the unpredictability of trying to sway public opinion. This uncertainty makes the win-set smaller.

One of the internal considerations that Level I negotiators could not have predicted, and therefore could do little about, was the importance placed on the lack of biosafety legislation to protect both countries. Neither country had legislation in place, yet they reacted in opposite ways to the offer of genetically modified food aid. This means that, even if Level I negotiators had tried to guess whether lack of legislation would sway what happened, they would have been wrong 50% of the time.

The second reason for uncertainty as to how the domestic level would respond to initial negotiations between Level I and the government was the actions of politicians. Opposing politicians might have chosen not to politicize an issue that was so serious, preferring instead to focus on making sure their constituents were eating. Or, they might have chosen to make an issue of what was happening, making accusations and causing problems. How politicians would react meant great uncertainty and this uncertainty meant that it would be difficult for Level I negotiators to influence.

There was one more consideration Malawi had that Zambia did not. Though both countries are among the poorest in the world, in the years leading up to the 2002 crisis, Malawi had experienced a series of setbacks and crises that put it in a much worse position economically and agriculturally than Zambia. This position was a decisive factor in Malawi choosing to accept the genetically modified food aid.

## 6.3 Domestic Politics and Internal Considerations

Politicians, no matter how powerful, are not free to do what they want without repercussions, especially in a democracy. In a functioning democracy, the electorate has the power to hold politicians accountable through elections. Public opinion is another powerful way of holding politicians accountable, and much of this is done through the media of a country. It is because politicians may be held accountable that internal considerations such as legislation, public opinion, opposition from other politicians, and other domestic considerations, including the status of the country, must be considered on Level II.

### 6.3.1 Electoral Accountability and Domestic Audiences

One of the concerns democratic governments must consider when deciding to act is whether they will be punished politically by voters who are dissatisfied with their performance. Gelineau (2013) looks at how citizens in the developing world act in terms of holding elected officials accountable. Gelineau looks specifically at how economic interests intersect with approval of elected officials. He studies this in part by using data on public opinion. Gelineau (2013, 421) finds that citizens' likelihood of supporting an incumbent president or government is tied to how they view the economy. If they feel the economy is doing well, they will support the incumbent. If they feel the economy is not doing well, they are less likely to support the incumbent. Gelineau (2013, 423) also found that voters are more likely to look at prospective success rather than retrospective analysis. This is one way that a government could survive after a

crisis like a famine. If they are seen to be acting proactively to take care of the crisis, even if that crisis is not yet taken care of, they are less likely to be punished electorally. One can see how this occurred in both Zambia and Malawi, even though they made different decisions. In Zambia, the government was very proactive in their campaign against the genetically modified food aid, and about GM technology in general. This meant that even after refusing the food aid, the government could be seen as having protected the people. In Malawi they made the opposite decision, but again, it was proactive and could be seen to be helping the people. In both countries, the public had reason to believe that their government was looking after their best interests.

Believing that your government is looking after you is an important consideration. If you do not feel your government is doing so, there are ways to punish the government. Though they are looking at the U.S., Levendusky and Horowitz (2012) make a powerful argument for why audience costs factor into whether a leader is punished. Audience costs are defined as "the punishments, in the form of lower support, meted out by domestic populations against leaders." (Levendusky and Horowitz 2012, 324) They suggest that there are three factors that go into whether these punishments happen or not.

The first factor is the leader's partisanship. Levendusky and Horowitz (2012, 325) hypothesize and show that in terms of national crises, partisanship plays a smaller role than one might expect. This is because in the immediate aftermath of a crisis voters are likely to be swayed more by how elites are framing the issue than by party affiliation. In addition, the leader acts as the most

persuasive voice because they are seen as having an informational advantage over the people (Levendusky and Horowitz 2012, 325).

The second factor in determining audience cost is embedded in the first, the reaction of elites. When considering a leader's actions, if voters do not understand the decision, they are likely to look to other elected officials, specifically their elected officials, for an explanation. There are two options here: either elites will split along partisan lines or they will unite. If they split along partisan lines, Levendusky and Horowitz (2012, 326) hypothesize and conclude that the power of the leader and the nature of the crisis will make voters reluctant to see a partisan issue rather than a national one.

The third factor is whether the leader justifies their decision. Levendusky and Horowitz (2012, 327) suggest that if a leader is able to put forth a reasonable explanation for their decision, explaining the logic and importance of the decision, the public is likely to accept the decision. They posit that this is because the ability to explain their decision costs the nation less credibility in the international community (Levendusky and Horowitz 2012, 327).

All Levendusky and Horowitz's findings come down to how much trust the people put in the leader in times of crisis. Because they tend to be the loudest voice, leaders have an advantage and often get the opportunity to adequately explain themselves and their decision, making audience costs lower than one might expect (Levendusky and Horowitz 2012). One can easily see how this is relevant in Zambia and Malawi, where it was the leaders' decision as to whether to accept or reject the genetically modified food aid. Both decisions could be

backed by reasonable explanations mostly accepted by the elite who, of course, were not going to suffer from the decision either way. This different situation in Zambia and Malawi shows why Levendusky and Horowitz's conclusions may not fit precisely with what happened in Zambia and Malawi in 2002. If the elected officials of the two countries were not going to be punished, then audience costs were not a concern.

Debs and Weiss (2016) also look at domestic audiences and international events. They theorize that a country's resolve in the face of an international crisis has a strong domestic component that should not be ignored. They argue that the strength of a state's bargaining position depends on two factors: how favorable the domestic audience is to the outcome and the leader's competence in managing conflict (Debs and Weiss 2016, 404). They agree with Levendusky and Horowitz (2012) that citizens do not automatically punish a leader who backs down in a crisis, but that the leader is given an opportunity to explain the circumstances and reasoning. In other words, citizens care about the context of a situation (Debs and Weiss 2016, 404). A favorable domestic audience means that a government may be able to force more generous concession when bargaining in a crisis, because they have the country behind them (Debs and Weiss 2016, 425-26).

Debs and Weiss are not writing specifically about two-level games, but their argument can easily be applied. The support of the people is an important consideration on Level II. Citizen support means a government is strengthened when negotiating with Level I because they can use the people's support to

restrict their own win-sets, helping to strengthen their bargaining position. The people's support also means that reverberation is less likely to occur because people supporting their government are not likely to be disaffected enough to respond to Level I attempts to change the game through influence on Level II.

James Fearon (2004) also writes of international bargaining and domestic audiences. Fearon (2004, 577) contradicts Levendusky and Horowitz (2012) and Debs and Weiss (2016) in whether a leader who backs down from a crisis is punished domestically. He also argues that the side with strong domestic backing will be less likely to back down in times of international disputes (Fearon 1994, 570-580). This is especially interesting in terms of what happened with Zambia and Malawi in discussions with the U.S. The U.S. food aid program has wide public support, and the U.S. did not back down when asked to separate the genetically modified food aid from nongenetically modified.[109] Zambia and Malawi, on the other hand, suffered from confusion in their decision and therefore a lack of widespread support. Neither country was able to prevail in their argument with the U.S.

Ramsay (2004) offers another view of why electoral punishment may or may not happen. Ramsay (2004, 459) looks at how politicians in democracies are unique when it comes to international events because they must deal with both national and partisan interests and arguments. In times of crisis, opposing

[109] According to a recent survey conducted by the University of Maryland, U.S. humanitarian assistance, in the form of food and medical assistance, is supported by 81% of Americans. See Steven Kull, "American Public Support for Foreign Aid in the Age of Trump," Brookings Institution, https://www.brookings.edu/research/american-public-support-for-foreign-aid-in-the-age-of-trump/ (accessed November 30, 2017).

politicians are in a unique position to wound their opponents, as attention is focused on the issue. As will be seen, this happened in Zambia to President Mwanawasa as he faced opposition from different political parties.

### 6.3.2 Public Opinion in the Literature

Though Africa is incredibly diverse, much can be learned from looking at the literature that has been written on other countries' reactions in certain situations, specifically because developing countries face challenges that the developed world does not. That is why the emphasis in this section will mostly look at public opinion and voters in Africa and the developing world.

Politicians need to be concerned about what the public thinks of them. In a democracy their very survival as politicians depends on it. Politicians need to take into account that with public opinion if they make the public unhappy they may not be re-elected. According to Baum (2004), this limits the promises politicians make because they fear that they will be held accountable for those promises in the next election. By making promises, the politician risks punishment, but also ups the ante on what they must do. According to Baum (2004, 603) when looking at foreign policy, this fear of not being re-elected because of broken promises means that leaders will often make foreign policy decisions privately, out of the public spotlight. This reduces potential backlash but also makes the backlash worse if the actions come to light. Though it cannot be said that either decision was made in secret in Zambia and Malawi, the decision was never presented to the public for their approval or rejection. This

could have had repercussions for both governments.

HIV/AIDS is a problem in much of Africa and is therefore well-studied. Jeremy Youde (2009) and Per Strand (2012) have both studied public opinions of citizens in Africa on how their government is handling the crisis. Youde used survey data from Afrobarometer to look at the factors that lead to higher support for a government's AIDS policies. Youde (2009, 230) found something very interesting—support for a government's AIDS policy is tied to general approval of the government. This could mean that approval of a single issue is immaterial because it is simply part of a larger whole approval of the government in general. That means that efforts to move public opinion on a single issue are bound to be difficult because approval or disapproval is tied into a larger network of issues.

Strand (2012) takes a different tack. His article looks at how public opinion can be mobilized to bring emphasis to issues that may be low on a government's agenda. Strand (2012, 184) finds that leverage could be used to push an issue up the agenda by using vertical accountability (that is, accountability between the people and the government), but it is unlikely on AIDS unless there is a dramatic increase and shift in public awareness of AIDS. This was also true in Zambia and Malawi in 2002. Differences of opinion and lack of unity on what to do meant that the public's ability to force change in the government was limited.

### 6.3.3 Public Opinion and the Media

Some scholars have focused on how the media functions in changing the minds of the general public. One relevant study was done by Uche Onyebadi in his 2012 article, "Newspaper Agendas and Public Opinion in the 2007 Kenyan Presidential Election." In the article, Onyebadi looks at newspaper coverage in the Kenyan election in order to determine whether they had an effect on the election. By studying two of the major newspapers in Kenya, Onyebadi found a high and positive correlation between the issues the newspapers chose to focus on and what the voters considered their major concerns (Onyebadi 2012, 43).

Onyebadi's work shows the importance newspapers can have on people's attitudes. This is especially important in Zambia and Malawi, where much of the debate over the genetically modified food aid being offered occurred in the newspapers. It is hard to say whether the diversity of opinions expressed in the two major newspapers, *The Post* and the *Times of Zambia,* contributed to the confusion, or whether they were merely reflecting the already confused state of things. Either way, Onyebadi has shown that newspapers can have an effect on public opinion by using their format to steer the public toward certain stories and away from others. By emphasizing one story over another, newspapers exert a powerful effect on public opinion.

One issue that needs to be addressed in looking at how much media can affect public opinion is level of access and ability to take advantage of that access. In 2002 Zambia had a literacy rate of 69.1%.[110] Malawi's literacy rate

[110] World Data Atlas, https://knoema.com/atlas/Zambia/Adult-literacy-rate (accessed October 26, 2017)

was around 62%.[111] This means that the majority of adults were capable of getting their news through the newspapers, if they had access. This is important because of the extensive use I make of newspaper articles. If the public never read the newspapers then they cannot be considered a factor in public opinion. In that case, they are only useful for the information I gathered from them, a not insignificant importance.

In my time spent in Zambia and Malawi both during my formal field research and during the times I have visited Zambia for other reasons, I informally spoke to many people in both countries who indicated that news of the governments' decisions was widely broadcast via radio.[112] In a 2007 article Jacob Bor (2007) found that level of radio access played a large role in whether an individual considered AIDS an urgent national issue. This is especially important when considering Zambia and Malawi, where the radio is still an important means of transmitting information to people.

Another look at how media can sway public opinion in Africa is given in Catie Bailard's 2016 article, "China in Africa: An Analysis of the Effect of Chinese Media Expansion on African Public Opinion." In the past decade or so, China has been making a concerted effort to expand its investment in Africa. However, public opinion towards China and its efforts has not always been favorable, leading China to create a plan to increase its soft power through positive media attention. Bailard (2016, 446) looks at this effort in order to discover whether it

---

[111] World Data Atlas, https://knoema.com/atlas/Malawi/Adult-literacy-rate (accessed October 26, 2017)

[112] Rory Carroll. "Zambians Starve as Food Aid Lies Rejected." *The Guardian*. October 16, 2002. https://www.theguardian.com/science/2002/oct/17/gm.famine1 (accessed October 31, 2017)

was successful by exploring correlations between media saturation and attitude towards China. Bailard (2016, 462) concludes that China's efforts have been successful in changing attitudes. Bailard's conclusion of success differs from Youde's conclusion that is difficult to change minds on single issues.

## 6.4 Evidence

This section is akin to international pressures on Level I, but instead looks at pressures from the domestic side. Like some of the players on Level I, not all of the players on Level II necessarily had the power to affect change, but were nevertheless vocal in their support or opposition to the idea. Some of the protests were relatively easy and straightforward for the government to act on, such as putting in place legislation in order to protect the countries. Others were much harder to respond to, such as public opinion and belief on what the food aid would do to the ecosystem and people's health. In those cases, there was a lot of confusion over what the truth was, and it was difficult for opposing civil society members, scientists, and opposition political leaders to counteract strongly held beliefs. Finally, one other consideration was the state of the economy and agricultural sector in Malawi. Because Malawi was in a different position than Zambia, they had an additional consideration.

This section first discusses the problem with the lack of legislation, how it played into the decision, and how the problem was addressed. It then explores two sections of public opinion. The first is what was believed about the science behind genetically modified food, what was said, and why it was or was not

believed. The next section of public opinion will relate what the public believed about the harms or benefits of genetically modified food. Opposition by other politicians was also a component in Zambia and is discussed in the next section. Finally, the situation in Malawi will be explored to show how it became a much bigger factor in Malawi's decision to accept the genetically modified food aid even in the face of concerns about its safety, possible damage to the environment, and the lack of legislation in place to protect themselves from it.

### 6.4.1 Lack of Legislation

One powerful internal consideration for both Zambians and Malawians was that they had no legal structure in place to regulate genetically modified organisms once they were in the country. That meant that up to that point, companies could have imported genetically modified food to plant or sell without notifying the government of what they were doing. Indeed, according to some, bio-engineered food was already being sold in the country.[113] Without the legislation in place, both countries were at risk of permanently ruining their ecosystems in terms of trade with the EU. Yet, it wasn't until the genetically modified food aid was offered that it became a pressing concern. For some, this presented a reason to reject the food entirely, while for others, it meant that they needed to quickly get legislation in place.

In Zambia, the lack of legislation was a reason to reject the food aid. According to Doris Musonda, CEO for the National Biosafety Authority, "we didn't

[113] Sheikh Chifuwe, "Sata Criticizes Government's Rejection of GM Maize," *The Post,* September 12, 2002. http://allafrica.com/stories/200209120414.html (accessed August 16, 2017)

even have the legal framework to regulate or do anything about the GM materials. So the government felt it was safer to reject the maize in order to protect the country, and especially the biodiversity and seed, to be specific.[114] In addition to protecting their ecosystem, Zambia felt they needed to give their farmers legal recourse should their crops become contaminated with genetically modified seed.[115]

Some in Zambia were critical of the government's lack of preparation in not already having passed a biosafety act. Dr. Mwananyanda Mbikusita Lewanika said that the government should not have been caught with its pants down over the issue of food aid from the U.S. because they had had at least five years of being urged to pass protective legislation and had failed to do so, and were now paying for their lack of urgency.[116] Dr. Lewanika, who was a researcher at the National Institute of Scientific and Industrial Research, urged the government to issue an interim administrative structure that could address GMO issues until a national biosafety framework was established. He said, "The government should take steps that will lead to the development of national capacity to detect GMOs in food and foodstuff."[117]

When starting to draft a biosafety policy, members of the government looked at other countries for what they had done to protect themselves.

---

[114] Doris Musonda, Personal Interview, August 31, 2016, Lusaka, Zambia; see also Bivan Saluseki, "Lusaka Shouldn't be Pushed Into Acccepting GMOs," *The Post,* July 31, 2002. http://allafrica.com/stories/200207310099.html (accessed August 11, 2017)
[115] Brighton Phiri and Webster Malido, "Government is Undecided Over GM Maize," *The Post,* July 26, 2002 http://allafrica.com/stories/200207260327.html (accessed August 15, 2017)
[116] Mwananyanda Mbikusita Lewanika, "After GM Food Aid, What Next?," *The Post*, August 8, 2002. http://allafrica.com/stories/200208080601.html (accessed August 16, 2017)
[117] Brighton Phiri, "U.S. Comes Under Attack Over GMOs," *The Post*, August 13, 2002. http://allafrica.com/stories/200208130100.html (accessed August 16, 2017)

Specifically, Zambians looked to the EU for their policy. In October of 2002, the EU came out with more guidelines regarding GMOs. The Zambian government hailed these new guidelines because they claimed it justified their decision to reject the genetically modified food aid. However, they came under criticism for that. Simon Zukas, National Chairman of the Forum for Democracy and Development, accused the government of lying to the people about what the report said. He said, "We want government to be honest and transparent and not tell us lies. Politicians sometimes can tell lies but not government."[118] Mr. Zukas claimed that the EU had not banned GMO products as the government was claiming, but instead recommended that all nonorganic crops be labeled as such. Mr. Zukas then went on to say that this was why people were calling for President Mwanawasa to go, because he and his government were not doing enough to mitigate the suffering of starving Zambians.[119]

Despite criticisms, in 2002 Zambia did recognize that GM technology was becoming more prominent and being used by more countries and that they needed to protect themselves. In 2002 the government drafted a National Biotechnology and Biosafety Policy by holding a series of consultative meetings with a number of stakeholders. The draft policy was then submitted to the Department of Science and Technology. However, the Biosafety Act was not signed into law until 2007, long after the crisis had passed.[120]

---

[118] Larry Moonze, "Zukas Criticizes Levy for Refusing GMOs," *The Post,* November 4, 2002. http://allafrica.com/stories/200211040050.html (accessed August 16, 2017)
[119] Larry Moonze, "Zukas Criticizes Levy for Refusing GMOs," *The Post,* November 4, 2002. http://allafrica.com/stories/200211040050.html (accessed August 16, 2017)
[120] Bivan Saluseki, "Lusaka Shouldn't be Pushed Into Acccepting GMOs," *The Post,* July 31, 2002.; see also Doris Musonda, Personal Interview, August 31, 2016, Lusaka, Zambia.

In Malawi, people in the government and in civil society were also keenly aware that there was no system of protection in place. Tamani Nkhono Mvula of CISANET expressed the concern this way:

> …Our main concern at that time was that as a country, because this has just come, it's an issue that we never thought we were going to come face to face with it. So the institutional framework was not there. We didn't have policies, we didn't have laws to manage issues of biosafety.[121]

Yanira Ntupanyama agreed that there was no structure in place, and that Malawi needed to protect itself.[122] However, in Malawi, this was not seen as a reason to reject the food. Instead, the attitude was that they would accept the food and then quickly get a policy in place, to protect them in the future, not only in terms of protecting the ecosystem, but also in terms of protection against companies that might want to import GMOs, or from scientists who wanted to conduct trials on genetically modified seeds.[123]

Unlike Zambia, Malawi was able to implement a policy very quickly. By September of 2002, the National Biosafety Act existed. Malawi had also looked to other countries for suggestions on what to put into the act.[124] Though the act was not issued in time to cover the importation of the genetically modified food aid, Malawi felt that they were protected in future instances.[125]

The lack of legislation was a problem for both countries, yet they reacted to the lack in very different ways. Zambia used the lack of protective legislation as a reason to reject the genetically modified food aid and then went through the

---

[121] Tamani Nkhono-Mvula, Personal Interview, August 16, 2016, Lilongwe, Malawi.
[122] Yanira Ntupanyama, Personal Interivew, August 17, 2016, Lilongwe, Malawi.
[123] Tamani Nkhono-Mvula, Personal Interview, August 16, 2016, Lilongwe, Malawi.
[124] Boniface Mkoko, Telephone Interview, August 20, 2016, Lilongwe, Malawi.
[125] Yanira Ntupanyama, Personal Interivew, August 17, 2016, Lilongwe, Malawi.

process of drafting a biosafety act fairly slowly, whereas Malawi saw the offer of genetically modified food as a reason to act quickly and get legislation in place to protect themselves. I posit that this was because, as will be seen in greater detail later in this chapter, Malawi had greater need of the food and thus needed to act quickly. Zambia was in a better position and thus used the lack of legislation to act differently. This was just one of the internal considerations both governments had to take into account as they made their decision.

### 6.4.2 Public Opinion

As has been shown, public opinion can be powerful, and in 2002 in both Zambia and Malawi there was great confusion in the public about whether genetically modified food was acceptable to eat or to plant. Though I have not been able to find polls taken at the time, the interviews conducted, the newspapers of the time, and the many people I spoke with informally all indicate that the general feeling was and still is against genetically modified food. This was in part due to traditionally held beliefs about how the food would affect health and fertility as well as what people were being told in the media. Indeed, in the midst of the crisis the Regional Director for WFP Judith Lewis said in an interview that, "There is a great deal of disinformation, misinformation and lack of information regarding the GMO issue."[126]

This section will discuss what the public thought and what they were being told during the famine period of 2002. The areas of concern in public opinion

[126] Staff Reporter , WFP Clears Air on GMO Food Issue," *Financial Gazette,* August 14, 2002. http://allafrica.com/stories/200208150482.html (accessed August 15, 2017)

are: matters to do with science, matters to do with health, and other miscellaneous concerns.

6.4.2.1 *Public opinion: Science*

Public opinion about the science of genetically modified food in some cases contradicted what the scientists were actually saying. As was established in Chapter 5, many scientists were in favor of GMOs and saying so, saying that many of the beliefs being stated were false and not based on actual science. Nevertheless, the beliefs persisted. Part of the issue was that the scientists did not have the time, the desire, or the ability to disseminate their information. According to Kingdom Kwapata, a biotechnology researcher, this is a common problem with scientists. After clearing many hurdles, Dr. Kwapata is currently running trials for genetically modified cotton in Malawi, the first trial of its kind in the country. According to him:

> Sometimes you, as a scientist, you derail from your whole objective in science and then you start focusing on managing the public aspects, politics, human relations and all of that, yeah? In order to bring people up to speed, but also to convince people that, you know, what we're doing is absolutely safe. Yeah, so there's a lot of resistance.[127]

Not all scientists are willing for their projects to be derailed in order to educate the public. This means that the public does not always hear directly from the people most likely to understand what is happening.

Many reasons were given by various people for not wanting to accept the genetically modified food aid. According to Ephraim Nyondo, the main GMO

[127] Kingdom Kwapata, Personal Interview, August 12, 2016, Lilongwe, Malawi

reporter for the Malawi Nation Newspaper, there were ethical reasons, with people believing that planting genetically modified seeds would make the land barren so that farmers would be unable to plant anything else.[128] Scholastica Chidyaonga, Director of the Department of Disaster Management Affairs in Malawi, also recalls that that is the information the farmers had: "the government at the national level makes those decisions. But there hasn't been any research on what GMO maize is like. But what I'd heard is that once you put in GMO maize you lose local varieties, you know?"[129] Ms. Chidyaonga's statement is interesting on several levels. First is her belief that there was no research on genetically modified maize. This was untrue in 2002; there was plenty of research, though it was not conclusive. Second, Ms. Chidyaonga, as a member of the government, is not well-informed about what the seeds would actually do, even today. Lastly, the statement that it was the national government that would make those decisions reflects a powerlessness over the situation. In 2002 Ms. Chidyaonga was not a member of government, and so had no power over the decision.

Even those who were scientists were hearing very little good about genetically modified organisms. According to Doris Musonda, now CEO for the National Biosafety Authority in Zambia, there was a great deal of negativity surrounding bringing in the genetically modified food aid:

> …when we started to know or to learn about the GM technology, or GMO as it was known at the time, technology, I think it was brought in with a lot of negativity. I don't remember that time hearing much about anything positive except that it could increase yields, especially for crops, but apart

[128] Ephraim Nyondo, Telephone Interview, August 5, 2016, Lilongwe, Malawi
[129] Scholastica Chidyaonga, Personal Interview, August 11, 2016, Lilongwe, Malawi

> from that time I do not remember…but I also considered it mostly negative, but I think the fear was about the dominator gene which could compromise the seeds in the country, because we were informed that if our GM crops were grown then and they cross-pollinated with our local varieties, that would be the end.[130]

This negativity was especially reflected in the Zambian press. Some were trying to fight against it, stating the positive effects. Dr. Luke Mumba, then UNZA's Dean of the School of Natural Sciences and now Vice Chancellor of UNZA, was one passionate advocate for getting rid of what he termed the "myths" surrounding GMOs. In an article written in The Post in July of 2002, Dr. Mumba tried to educate the public in regard to the common beliefs about GMOs, trying to state the science in a way that would be understandable to the layperson.[131] Dr. Mumba also gave interviews in which he tried to allay fears by pointing out that fears that genetically modified seed would damage the ecosystem. Dr. Mumba said that the chances of the seed germinating were very low, and thus the risks posed to the Zambian ecosystem were negligible.[132]

On the other side, the Times of Zambia published a series of editorials about the dangers of accepting the food aid. In one editorial, the Editorial Board claims that, "even GMO backers know that its seed cannot gel [germinate] in these parts. They are pushing for Zambia to 'just send the maize to millers and feed your hungry' knowing full well even that exercise is not foolproof to prevent farmers from planting its forbidden seed and thereby mess up the country's soil

---

[130] Doris Musonda, Personal Interview, August 31, 2016, Lusaka, Zambia
[131] Luke Mumba, "Safety of GMOs," *The Post*, July 29, 2002. http://allafrica.com/stories/200207290123.html (accessed August 16, 2017)
[132] Brighton Phiri, "U.S. Comes Under Attack Over GMOs," *The Post*, August 13, 2002. http://allafrica.com/stories/200208130100.html (accessed August 16, 2017)

chemistry."[133] The editorial went on to decry those who were speaking in favor of accepting the food aid, and commended Minister Sikatana, the Minister of Agriculture who was outspoken in his defense of rejecting the food aid:

> And for those Zambians who've joined the bandwagon of saying "just eat since you don't invest in science and technology" it is a little too presumptuous. The same people won't be there when the forbidden GMO seed causes anarchy in Zambian agriculture. By then the country would have been beaten back a great deal. Prevention is cheaper than cure and we commend Mr Sikatana's meticulously fulfilled stance against GMOs.[134]

Other concerns about the scientific aspect of accepting the food were about who would benefit from the acceptance. Professor Kazhila Chinsembu was concerned about who would win and who would lose with acceptance of the genetically modified food aid: "If we become excited over GM maize, we risk destroying the potential for sustainable food security. By accepting GM maize, we are making ourselves perpetually dependent on seed from these multi-national corporations."[135] Pattrice Le-Muire Jones, coordinator of the Global Hunger Alliance, was also concerned about who would benefit: "In truth, the real winners are the seed/agrochemical companies like Monsanto and the animal agriculture corporations like Tyson."[136] I found no evidence that U.S. corporations like Monsanto and Tyson pressured Zambia or Malawi directly to accept the food. However, lobbies for GM technology are strong in the U.S., as

---

[133] Editorial Board, "Opinion," *Times of Zambia*, October 31, 2002. http://allafrica.com/stories/200210310667.html (accessed August 16, 2016)
[134] Editorial Board, "Opinion," *Times of Zambia*, October 31, 2002. http://allafrica.com/stories/200210310667.html (accessed August 16, 2016)
[135] Brighton Phiri and Webster Malido, "Government is Undecided Over GM Maize," *The Post,* July 26, 2002 http://allafrica.com/stories/200207260327.html (accessed August 15, 2017)
[136] Staff Reporter, "Focus on GM Food Aid," *IRIN*, July 2, 2002. http://allafrica.com/stories/200207020658.html (accessed October 25, 2017)

can partially be seen by U.S. policy on GM technology, and thus the corporations were silent partners in U.S. pressure.

Finally, warnings were given against some scientists themselves who may have hidden agendas. Though she does not name specific people, Emily Sikazwe, the Executive Director of Women for Change, warned in an interview that she was not going to name names, but wanted the Zambian people to remember that during World War II scientists were complicit in committing crimes against humanity; she went on to say, in reference to those scientists who were so opposed to the food aid: “I hope our local scientists are not being used to commit crimes against their own people."[137]

6.4.2.2 *Public opinion: Health*

This segment of public opinion is that having to do with health. This subject was partially covered in Chapter 5, looking at what the scientists were saying about ill effects. This segment will focus on what the public heard and believed. There were two considerations here. On one side were the rumors and beliefs about the harms genetically modified foods could bring to the human body. On the other side was the fact that people were in danger of starving, something that is also injurious to one’s health.

There were many beliefs floating around both countries about genetically modified food in 2002. Some were traditional beliefs, that consuming GMOs

[137] Brighton Phiri, “U.S. Comes Under Attack Over GMOs,” *The Post,* August 13, 2002. http://allafrica.com/stories/200208130100.html (accessed August 18, 2017)

would cause infertility.[138] People also believed that genetically modified food contained toxic substances that only emerged after cooking. This would result in mutations, cancers, immunodeficiencies, problems with reproduction, and deformities in children.[139] Other rumors in Malawi included the belief that Americans did not actually eat the food themselves, that they instead gave it to their animals. According to this belief, the food was fine for animals, but would cause problems if consumed by humans.[140] All of this was compounded by the belief held by some that the food was another attempt to harm Africans by giving them poisonous food. This tied back to the belief of the origin of HIV/AIDS in Africa, where it was believed that a doctor had been conducting experiments to give the disease to Africans in order to get rid of them.[141] With all of these beliefs being propagated by different entities, it is little wonder that people were afraid to consume the genetically modified food aid being offered.

Mrs. Beatrice Chola of Bwafwano was also concerned about giving genetically modified food to the almost 1000 people she helped feed every day. Many of the people she worked with were HIV positive. In recalling a discussion she had with the WFP she said,

> The problem talking to the manager [is] how it is going to affect the children. But they said that the government said that they cannot go on with the food which is, which is genetically modified. I said, you cannot because it will bring a lot of illness to the people. Yeah, and if it is not taken care of there most of them are [HIV] positive, so maybe it can affect

---

[138] Ephraim Nyondo, Telephone Interview, August 5, 2016, Lilongwe, Malawi; see also Madalitso Mwale, Personal Interview, August 11, 2016, Lilongwe, Malawi
[139] Kennedy Choongo, "Political Watch: Establishing Safety of GM Maize," *The Post,* August 2, 2002. http://allafrica.com/stories/200208020057.html (accessed August 15, 2017); see also Doris Musonda, Personal Interview, August 31, 2016, Lusaka, Zambia
[140] Kingdom Kwapata, Personal Interview, August 12, 2016, Lilongwe, Malawi
[141] Kennedy Choongo, "Political Watch: Establishing Safety of GM Maize," *The Post,* August 2, 2002. http://allafrica.com/stories/200208020057.html (accessed August 15, 2017)

them more.[142]

Despite her fears, Mrs. Chola remained willing to accept the genetically modified food because she felt that it was better to risk the kids getting sick in the future than to risk their lives in the present.

One belief tried to take into account some of the evidence that genetically modified foods were not harmful to humans, at least in small quantities. Dr. Wilkson Makumba pointed out that perhaps genetically modified food was safe for Americans, because they did not eat it in great quantities. This was not true in either Zambia or Malawi, where people in both countries consume mealie meal, nsima, or nshima, a maize-based mush that is a staple three times a day. Mealie meal is ground up maize and is eaten at essentially every meal as a cheap way to fill stomachs. Dr. Makumba believed that research had not been done on such massive consumption of genetically modified food, and so the science could not be relied upon and Africans were still in danger of harmful effects from the food.[143]

However, efforts were made to counteract these rumors of harm. Others insisted that there was no evidence that genetically modified food either hurt or killed humans. They argued that most processed food already contained some traces of genetically modified food and had failed to make people sick, so why would genetically modified maize make people sick?[144] These beliefs held by the public only added to the confusion about what the genetically modified food aid

[142] Beatrice Chola, Personal Interview, July 7, 2016, Chizanga Compound, Lusaka, Zambia
[143] Wilkson Makumba, Personal Interview, August 16, 2016, Lilongwe, Malawi.
[144] Tamani Nkhono-Mvula, Personal Interview, August 16, 2016, Lilongwe, Malawi.

would do.

### 6.4.3 Government Officials

In addition to what was happening with public opinion, in Zambia the government was facing opposition from other members of government. President Mwanawasa's party was the Movement for Multiparty Democracy (MMD). Two other political parties played (and still play) a large role in the government, the United Party for National Development (UPND) and the Patriotic Front (PF). Though I found no evidence that the MMD criticized President Mwanawasa's decision, the UPND and the PF both had members who were critical of the decision.

The UPND was particularly critical of the government's decision. The leader of the party, Saqwibo Sikota, made a statement in direct contradiction of the government's assertion that GM food was a health risk, telling the BBC's Network Africa that there was no scientific evidence of this.[145]

Japhet Moonde, UPND MP for Bweenga in the south of Zambia, was another of the members of government who was an outspoken critic of how the government handled the decision to reject the genetically modified food aid in Zambia. In August of 2002, just before the final decision was announced, Mr. Moonde pointed out the severity of the problem in his constituency: "The hunger situation ravaging Zambia in general and Southern Province in particular needs

[145] Will Knight, "Zambia Bans GM Food Aid," October 30, 2002, *New Scientist*, https://www.newscientist.com/article/dn2990-zambia-bans-gm-food-aid/ (accessed November 7, 2017)

urgent attention and caution. The debate going on as to whether or not to accept the GMO must come to an end. A decision should be made in one way or another on this matter."[146] Mr. Moonde was also critical of what he termed the government's casual approach to the problem, saying that they were treating it like it was an academic exercise rather than the crisis it was. He accused the government of playing politics with the situation and being irresponsible with people's lives.[147]

The next month, after the government announced that they would reject the food aid, one of Mr. Moonde's fellow UPND members, Vitalis Mooya, also went on the attack. He claimed that people in his constituency were resorting to eating poisonous tubers in order to survive, which was just as bad as giving them genetically modified food to eat. Mr. Mooya said that though the decision had been made, the government had failed to follow up with a viable alternative for feeding starving Zambians, because people in his constituency were in danger of dying from starvation.[148]

Mr. Mooya's statements did not go unchallenged. In October, after he had claimed that three elderly people starved to death in his constituency, Mr. Mooya was arrested on charges of making false claims aimed at arousing public alarm. Under Zambian law, Mr. Mooya's statements were an offense worthy of arrest. Mr. Mooya's claims were in direct contradiction to the image President

---

[146] Webster Malido, "End GM Maize Debate Before People Start Dying—Moonde," *The Post,* August 12, 2002. http://allafrica.com/stories/200208120659.html (accessed August 20, 2017)
[147] Webster Malido, "End GM Maize Debate Before People Start Dying—Moonde," *The Post,* August 12, 2002. http://allafrica.com/stories/200208120659.html (accessed August 20, 2017)
[148] Speedwell Mupuchi, "MP Asks Government to Act Quickly on Hunger," *The Post,* September 8, 2002. http://allafrica.com/stories/200209090052.html (accessed August 20, 2017)

Mwanawasa was trying to portray, that reports of starvation were greatly exaggerated, and according to reports, he ordered the arrest, though the police denied they were acting on political orders. President Mwanawasa echoed his critics' accusations in accusing them of playing political games with people's lives.[149] President Mwanawasa had just told his critics what they could expect if they continued their slander of his leadership.

However, this did not stop the opposition to government policy, though the players who criticized were in the higher echelons of politics. Michael Sata, founder of the PF and eventual President of Zambia, harshly criticized President Mwanawasa's decision, saying that he should be held accountable. Sata had a vested interest in being critical of Mwanawasa and the MMD, since he had broken with the MMD the year before in order to form the PF, and had been passed over for Mwanawasa as presidential successor by the previous president, Frederick Chiluba. As Mr. Sata said of the crisis, "Government should not play with people's stomachs." Sata claimed that the decision arose partially because MMD politicians were not starving themselves and out of touch with what was happening in compounds and rural areas. In a twist of President Mwanawasa's words, Mr. Sata claimed that he would personally eat genetically modified foods rather than die from starvation and that he did not understand what all the arguing was about, since Zambians had been eating bioengineered foods for years. Mr. Sata even claimed that the food handed out in the 2001 election by the MMD in an effort to sway people's votes came from the U.S. and was

---

[149] Staff Reporter, "Mwanawasa Cracks Down Over Food Crisis," *IRIN,* October 9, 2002. http://allafrica.com/stories/200210090438.html (accessed August 21, 2017)

therefore genetically modified. Finally, Mr. Sata asked that he government come up with a coherent policy position on GMOs instead of the political statements they had been making that were of no help to the people.[150]

Guy Scott, a former Minister of Agriculture and also eventual President of Zambia, was equally critical of the government, calling their stance on genetically modified foods “overly paranoid.” Mr. Scott also denounced those who were supporting the government in their decision, especially NGOs: “What we will see now is how many people die as a result of the disruption of the relief programme -- and how the various international NGOs that have spoken approvingly of the government's action will square the body count with their various consciences."[151]

### 6.4.4 Country Position

As mentioned in Chapter 1, Malawi was in a different position than Zambia. Though both countries were poor, Malawi was in a worse position because recent events had combined to create a perfect storm of need. There were two areas in which Malawi was worse off than Zambia: poor decision-making in terms of their food reserves, and poor relationships with the international community. Much of the details about Malawi are pulled from a fact-finding mission requested by Malawi and conducted by the WFP and Food and Agriculture Orgnanization (FAO) in May and June of 2002, a report from the

---

[150] Sheikh Chifuwe, “Sata Criticizes Government’s Rejection of GM Maize,” *The Post,* September 12, 2002. http://allafrica.com/stories/200209120414.html (accessed August 16, 2017)
[151] Rory Carroll, “GM Food Refusal Sets Precedent,” *Mail and Guardian (Johannesburg)*, November 1, 2002. http://allafrica.com/stories/200211010493.html (accessed August 17, 2017)

NGO ActionAid from June of 2002, and a report from the World Development Movement from October of 2002.

Malawi is a heavily indebted poor country, or HIPC. As such, it is often at the mercy of its international lenders, as well as other international institutions. As a HIPC, Malawi was subject to the structural adjustment programs of the 1990s like the Washington Consensus. This entailed reducing subsidies for small farmers and the poor, removal of price control and regulation, and privatization of some government agencies, including the Agricultural Development and Marketing Corporation, which had been responsible for those subsidies and the distribution of food aid (Owusu and Ng'ambi 2002, 10-11). This one-size-fits-all approach to development, encouraged by the IMF and World Bank and backed by the U.S., had disastrous effects in Malawi. Without price controls, the price of maize increased in the early 2000s and private grain traders hoarded supplies. Owusu and Ng'ambi (2002, 11) contend that this helped fuel a culture of corruption amongst government officials. These adjustments and the subsequent corruption that resulted led to a deterioration of the relationship between Malawi and international donors. Eager to please their donors, when the IMF suggested in 2001 that Malawi sell off its Strategic Grain Reserve (SGR) in order to repay money that had been borrowed partially to build up and maintain the reserve, Malawi did as suggested. Also at the suggestion of the IMF, Malawi sold the grain abroad rather than risk depressing maize prices by dumping the reserve on the Malawian market (ActionAid 2002, 10-11). It is difficult to know the truth of what was happening. Malawi insists that they

suffered from poor advice given by the IMF. The IMF claimed that they had "no expertise in food security policy and we did not instruct the Malawi Government of National Food Reserve Agency [responsible for the SGR] to dispose of the reserves." (Owusu and Ng'ambi 2002, 15) However, this was later somewhat contradicted by the Managing Director of the IMF, when he admitted to giving the advice (Owusu and Ng'ambi 2002, 15).

Whether it was poor advice from the IMF or a desire to please leading to misinterpreting what the IMF wanted, selling the grain was not enough to show real progress in Malawi, and the donors continued to withhold aid. Because of the corruption and bad governance, the IMF withheld balance of payments support and the U.S., the UK, and the EU all suspended development assistance (ActionAid 2002, 14).

The suspension of development assistance, especially by the U.S., is critical here. When the crisis started, Malawi was already in a weak position with the U.S. This meant that even the initial negotiations with the U.S. on Level I were bound to not be in Malawi's favor. Essentially, Malawi could demand nothing of a country that was already withholding other forms of aid. As seen before, Malawi asked the U.S. to pay to have the food milled before bringing it into the country. This was an attempt at negotiating in order to expand their win-set, but even this request was refused, though it meant that Malawi, a country already heavily in debt, would have to come up with an additional $20 million to pay for the milling themselves.[152]

[152] Staff Reporter, "Milling GM Food Aid Costs Malawi US$20 Million," *The Nation,* September 11, 2002, http://www.afrol.com/News2002/maw014_gm_foodaid.htm (accessed November 11, 2017)

## 6.5 Conclusion

Internal considerations are an important part of the domestic level when looking at a two-level game. They have the potential to completely disrupt the game by raising issues and concerns with domestic negotiators and putting pressure on leaders to change their minds about what they had agreed to when negotiating with Level I. This chapter has shown what the internal considerations for Zambia and Malawi were. They include the fact that there was no legislation in either country to protect them from biosafety issues with the genetically modified food aid. This would mean that they had no recourse against outside companies who wanted to flood the market with genetically engineered seed, nor would they be able to stop farmers who chose to plant those seeds. This was a powerful factor, yet the two countries reacted very differently to it. Zambia used it as a reason to not accept the food and thus to narrow their win-set on Level II. Malawi, knowing their circumstances necessitated the acceptance of the genetically modified food aid, instead acted quickly to enact legislation that would protect them.

Public opinion was another internal consideration. As has been shown, there was a great diversity of opinions in the public with little consensus. As with civil society, the lack of unity made for no power to sway the government either way. It cannot even be said that the government was paying attention to those who agreed with their position. This meant that public opinion was not instrumental in either widening or narrowing the win-set for either government. In addition, the attempts by Level I entities to affect public opinion through rhetoric

and statements issued by international public officials mentioned previously, were not sufficient to unite the public and give them one voice. Reverberation, though attempted, was also not a force in this case.

In Zambia the government had to contend with opposition from other political leaders. This was especially important because a successful protest against the government's actions by an opposing party leader could jeopardize the position of the president and his party in the next election. This could have led to a narrowing of the win-set because the Zambian government would have been afraid of electoral repercussions. However, the response of the Zambian government was to continue its campaign of articulating its position, and to try to shut down opposition from other political parties through intimidation, and on one occasion arresting an opposition politician for spreading misinformation.

In Malawi, there was one more consideration that had to be taken into account. Domestically, the country was in great disarray, with poor decisions about selling of their Strategic Grain Reserve and accusations of poor governance and corruption affecting the country's relationship with donors. This significantly decreased what they could demand from the U.S. and made bargaining a difficult proposition. This, more than any other factor, appears to have been the decisive issue for Malawi.

# CHAPTER 7

# CONCLUSION AND CONTRIBUTION

## 7.1 Introduction

In 2002, reaction against U.S. pressure, attitudes towards GMOs, and lack of protective legislation for GM technology successfully prevented the distribution of genetically modified food aid provided by the U.S. in Zambia, but not in Malawi. This dissertation has sought to trace the events that happened, the attitudes that were prevalent at the time, and the major arguments for and against accepting the food aid using the framework of two-level game theory to incorporate both international and domestic explanations for the actions of the two countries. The research question for the dissertation is: What were the forces and pressures at play in Zambia and Malawi in 2002 that caused them to make different decisions regarding the acceptance of genetically modified food aid?

This chapter discusses the whole of the dissertation, with particular attention to how it answers the research question, how it achieved the objectives set forth in Chapter 1, the limitations of evidence, and the application of Putnam's theoretical framework of two-level game theory. The chapter ends by explaining the contributions the dissertation makes to the knowledge of different areas.

## 7.2 Objectives and Hypotheses

The objectives of the study were as follows:

1. To understand how the different decisions were made in 2002 as to whether to accept genetically modified food aid from the U.S.
2. To understand how domestic and international pressures interacted to move each country toward their decision.
3. To understand how competing interests fed the politics of the situation.

This section will discuss the objectives and hypotheses of the dissertation and how they were answered.

The first objective of the dissertation was: To understand how the different decisions were made in 2002 as to whether to accept genetically modified food aid from the U.S. This was done using a variety of sources. The first was to trace what happened by using the newspaper articles. This showed what the thinking was as given by government officials and scientists, giving a day-by-day breakdown of the process. In addition, using newspaper articles from the time meant that direct quotes from government officials, scientists, civil society members, etc., could be used. This is important because using direct quotes means making less interpretation of what officials were thinking and instead presenting a straightforward account. In addition to the newspaper articles, the interviews conducted and presented helped show the process of decision-making in 2002 by speaking to people who were in a position to know what happened as well as the different factors that helped determine the outcomes for Zambia and Malawi.

This dissertation hypothesizes that there were three factors that led to the different decisions in Zambia and Malawi in 2002. The first factor comes from Level I of Putnam's game theoretical model, the international level. There were a number of international institutions and countries that weighed in and influenced the decision of the two countries. The first was the U.S. As the main contributors of the food aid to the WFP, they were the most prominent developed country in the debate. As such, representatives from the U.S. played a large role on Level I, dealing with negotiators from both Zambia and Malawi. The U.S., Zambia and Malawi all had their win-sets, that is, the set of propositions under which they would accept a deal. The U.S. win-set was simple: Zambia and Malawi accepted the food as is. Zambia's and Malawi's win-sets were also initially simple: to get the U.S. to only send food aid that was non-GMO.

In trying to guarantee their win-set, the U.S. representatives applied great pressure through rhetoric and criticism to Zambia and Malawi. In Malawi, because of domestic constraints they already had, they were in no position to bargain, and eventually accepted the genetically modified food aid, on the condition that it be milled. Malawi attempted to change its win-set by asking the U.S. to bear the expense of milling the grain, but was rebuffed. In Zambia, matters were different. Pressure from the U.S., which was really an attempt to change the game by persuading Level II, domestic groups and citizens within Zambia, that the food was good and should be accepted, made the Zambians suspicious of U.S. motives. Members of government began to wonder why the U.S. representatives were trying to so hard to get the food accepted. They

began to ask who was going to benefit and why. This pressure from Level I caused negative reverberations and made the Zambians step away from the offer of genetically modified food aid and become defiant in the face of international criticism.

This is one of the main areas of divergence between Zambia and Malawi. Malawi was not in a position to bargain, and due to aid cuts before 2002, were in an even more desperate situation because they could not even borrow money to buy maize. In addition, they had sold their reserves in order to pay off debt, so also did not have reserves. Zambia, though poor, felt it was in a better position to try to bargain, and used its suspicions about U.S. motives to reject the genetically modified food aid. Thus, Level I negotiations and reverberations seem to have had more of an effect in Zambia than they did in Malawi. This is one of the ways this dissertation contributes to the knowledge on the subject of the 2002 decisions, by showing the different motivations and incentives each country had to make the decision they did.

Other entities who applied pressure were the WFP, the WHO, and some NGOs like Greenpeace and ActionAid. Each of these had their own point of view as to what Zambia and Malawi should do. The WFP sought to remain neutral, while also being pragmatic that without the genetically modified food aid, they simply did not have enough food to distribute to stave off the famine in Southern Africa.

The EU is a curious factor on Level I. I hypothesized that fear of loss of trade with the EU would play a role in Zambia and Malawi's decisions, and it did,

but not in the way I expected. The EU was an indirect influence because, while its policies were part of the argument for rejecting the food aid, the EU itself did not enter the debate, and in fact was criticized by the U.S. and others for not taking a more active role and urging the southern African countries to accept the food. Because of this lack of action, the EU's role on Level I was both as important—in the sense that Zambia and Malawi feared loss of trade and used the EU as an example of not approving of GM technology—and not as important—in the sense that they made no threats of loss of trade—as I first assumed.

The indirect influence of the EU points to new knowledge in regard to Putnam's theoretical framework: international entities on Level I do not have to be directly involved in the game to have influence on the game. This is an important addition that adds to the knowledge of how two-level games work. Not only is it important to look at the immediate players of Levels I and II, it is also important to take into account other influences that are not so direct, but nonetheless powerful in affecting the game. According to many statements given by government officials, civil society members, and others, the EU had an impact on the decision, but not because the EU was trying to influence the game.

The second hypothesis comes from Putnam's Level II, the domestic level. On the domestic level, the statesman who negotiated with Level I comes back with a tentative agreement, contingent upon domestic forces in the country approving it. For this dissertation, there are two domestic factors. The first is civil society, which in the cases of Zambia and Malawi included most prominently

NGOs and the scientific community, as well as smaller players such as tribal chiefs and churches. Though civil society is active in both countries, its influence is unclear. Both countries had groups for and against accepting the food within their countries. This domestic Level II factor can be important because civil society groups may have the ability to influence what happens in the negotiations with Level I. However, influence is difficult to assess, especially in the cases of Zambia and Malawi. The diversity of groups trying to have a voice made applying pressure problematic because there was a lack of unity in what they believed and what they wanted. Also, civil society's ability to influence a decision, especially a decision made in the highest levels of government, is limited. Without influence over ratification of any deal struck with those on Level I, they were unlikely to affect the win-sets in Zambia and Malawi.

However, the variety of opinions put forth by the civil societies in Zambia and Malawi also meant that those on Level I had great uncertainty about what would be agreed to. This made trying to influence the game more difficult, because with such a diversity of opinion, it was difficult to say what would effectively influence the countries. This uncertainty may have helped expand the win-sets of the countries. Also, attempts by those on Level I such as the U.S. and the WFP to influence the domestic Level II were made more difficult because of the diversity and diffusiveness of civil society.

As was said before, influence is difficult to assess, and especially so in the case of civil society. The evidence is not conclusive either way. Certainly there were groups who advocated for the result the countries eventually accepted, but

this does not mean that the decision was a result of civil society's influence. This is especially true because civil society was so far removed from where the decision was made.

The third hypothesis is another domestic factor, internal considerations. According to Putnam (1988, 432), these may include legislators, political parties, and public opinion. In Zambia and Malawi the internal considerations of Level II included all of these plus one more factor, the situation Malawi was in.

Neither country was prepared for the possible effects of introducing GM technology into their country. Both lacked legislation that would protect them. In addition, public opinion was divided and diverse about what the effects of bringing the food aid would be. Also, in Zambia, politicians from opposition parties were attacking the government for its decisions.

Malawi had a greater concern than Zambia. Its recent history of interference from the IMF and the World Bank gone wrong had led to further poverty, more borrowing from outside the country, and corruption and bad governance within the country. These internal considerations meant that they were not in a position to demand anything of Level I negotiators, and indeed, they acquiesced to accepting the genetically modified food aid. This is in part because there was one more important consideration in Malawi—people had already starved to death. This consideration is the second reason for divergence between the two countries decisions.

Internal considerations are important in two-level theory because they play into the negotiations between Level I and Level II. The uncertainty and

unknowns of internal considerations make it difficult for Level I players to change the game by attempting influence. Level I players may attempt to influence internal considerations, but the unpredictability of domestic politics and other factors make it difficult.

Exploring the three hypotheses of the international and domestic factors allowed me to achieve both Objective 2 and Objective 3. Objective 2 was: To understand how domestic and international pressures interacted to move each country toward their decision. This is an especially important objective because it ties into the theoretical framework of the dissertation. On the international level, Zambia was concerned about what the GM crops would do to trade with the EU, and on the domestic level, it was concerned about the potential damage to its ecosystem and people. In addition to concern about trade with the EU, Malawi had to contend with its poor relationship with the international community on the international level, and on the domestic level it was concerned about the starvation of its people versus the potential damage to the ecosystem. This dissertation has shown that, though each country placed emphasis on different factors, both had domestic and international concerns. This is another area this dissertation emphasizes that other works on the subject have not.

Objective 3 was: To understand how competing interests fed the politics of the situation. This objective was fulfilled through all of the hypotheses as well. Looking at Level I allowed me to see the conflicting interests of the U.S. and EU and how their conflict spilled over into Zambia and Malawi. In addition, the evidence from Level I shows the differences in objectives between the U.S., WFP

on one hand and Zambia and Malawi on the other. Looking at Level II illuminated the conflicts within the countries that were pushing for and against acceptance of the genetically modified food aid. Civil society was active, but its influence was blunted by confusion and debate and the lack of institutional channels for such influence. These competing interests influenced the decisions in both countries.

## 7.3 Assessment of Sources

The nature of sources is critical to the effectiveness of a study, and I strove to find the best sources available to understand the situation in both countries. One difficulty that might have been solved given a lot more time and money was that there was no official documentation from either Zambia or Malawi. This means that I was not privy to the actual negotiations or discussions that occurred both between the U.S. and the countries and within the countries themselves. The lack of access to meeting minutes also meant that I was only able to assess the public statements of officials. What was said behind closed doors might have been very different and changed the conclusion. This is why it was important to speak to as many people who were involved as possible, to strengthen the argument of which factors were important in the decisions.

The delineation of stages in the negotiation process was another area where difficulty in accessing sources was made harder. I was unable to access meeting minutes for the governments in Zambia and Malawi and for the discussion at USAID and the WFP. Having those minutes would have made

process tracing much easier because it would have allowed me to create a timeline. The exact stages of negotiation were impossible to show with evidence I had available. Being able to show the stages of negotiation would have strengthened the use of the theory by being able to show exactly how reverberations worked through showing the pressures as they occurred and as Zambia and Malawi responded to them. However, I feel that I was partially able to make up for this lack by using newspapers and interviews to trace the public statements of U.S. and international officials, and in turn the reactions by Zambia and Malawi. So, while the minutes would have strengthened the argument, lack of them does not represent a critical failure in this dissertation.

## 7.4 Implications and Contribution

This dissertation has contributed to knowledge in several areas, from general areas to specific ones. The first is the understanding of the power imbalance between the developed and developing world and how that plays out in real situations. This is an important area in International Relations scholarship. Zambia and Malawi both came from a position of weakness, and this showed in how their individual games played out with the U.S. and other international institutions. Developing countries often face this situation when dealing with international institutions, and this dissertation shows that the story of how each country responds is complex and varied. Though perhaps nothing can be done about power imbalances, this dissertation adds to the literature of how countries are affected by the imbalances that exist in the international system, specifically

in terms of the developing and developed worlds. This dissertation addresses a weakness in the literature of how power dynamics play into the decisions of developing countries.

The second area is a contribution to the debate on GMOs and the developed world's influences, responsibilities, and obligations to the developing world when it comes to GM technology. Both the U.S. and the EU could have made the situation easier for Zambia and Malawi, the U.S. by removing the food or agreeing to bear the cost of milling it, though they were unlikely to do so because it would have required a change in how U.S. food aid is distributed. The EU could have helped by more actively entering the debate and assuring Zambians and Malawians that there were ways to work around them accepting the food aid, by making sure the food was milled or ensuring that if protections were put in place crops from Zambia and Malawi would have remained acceptable to the EU. This study has greatly added to the knowledge base of the implications of the GM technology debate for the developing world.

One of the reasons this dissertation is important is that it studies two specific countries, but the theoretical framework used also allows for the lessons learned about international pressure and domestic concerns to be applied to other developing countries in similar circumstances. These lessons include the fact that while countries may seem to be in similar situations and could thus be expected to make the same decision, in fact small differences can have a big impact. Zambia and Malawi were both poor in 2002, but the nature of their poverty impacted their decision. The dissertation also addresses a weak place

in the literature of understanding how GMOs are being received in the developing world, and how the developed world's attitude affects this. It is very important to understand because the GMO debate continues and countries are still being affected by it.

It is important to understand the reasons behind all the actors' decisions because understanding the reasons might change the actions of the international community, particularly the U.S. The U.S., as players on Level I, tried to change the game by attempting to persuade Zambians and Malawians of the health and safety of the genetically modified food aid. In Zambia, these attempts at influence caused negative reverberation and backfired for the U.S. Understanding that this reverberation was part of the motivation of the Zambians for rejecting the food has implications for how the U.S. could approach a similar situation differently in the future, though making changes to the food distribution process would necessitate a revision of U.S. food aid policy. And it is entirely possible that this situation will happen again. Africa is still subject to droughts, bad governance, corruption, and thus famine. Many of the countries still greatly fear GM technology. All of the elements exist for almost precisely the situation of 2002 to occur again. This makes it critical for the U.S. to understand its role in the decisions of 2002.

Though the famine and decisions that inspired this dissertation happened 15 years ago, the concerns about GM technology are still alive and well in Zambia, Malawi, and other African countries. In Malawi, there are limited genetic modification trials happening, especially in the areas of Bt Cotton and cowpea,

but, according to Kingdom Kwapata, the principal investigator of the Bt Cotton trials, the mood in Malawi is still fearful and though trials of nonfood items may be allowed, any trials approaching food are still prohibited.[153] Likewise, Doris Musonda of the National Biosafety Authority in Zambia—the office created by the biosafety legislation discussed in Chapter 6—when pressed as to whether Zambia would accept genetically modified food aid should another crisis situation arise, said that the National Biosafety Authority would recommend that the food be accepted, on the condition that it be milled first so it could not be planted.[154] All of this means that the lessons learned from this dissertation, including a country's relative position on the world stage, as well as its reactions to pressure, are very important to understand.

The third area of knowledge that this dissertation contributes to is comparing and contrasting the two stories to look for lessons. One of the major lessons is that both international and domestic considerations are critical to an understanding of the topic, but that, though countries may be similar, they may react entirely differently given the same situation. Zambia and Malawi faced the same situation in that they were both subject to the same drought and subsequent limitations of food supply.

The final area extends from the third one, and that is the contribution to two-level game theory. Two-level game theory has not been applied to these specific situations before, but helped explain what happened and why. This application helped both the understanding of the situation and improved the

[153] Kingdom Kwapata, Personal Interview, August 12, 2016, Lilongwe, Malawi.
[154] Doris Musonda, Personal Interview, August 31, 2016, Lusaka, Zambia

knowledge of how two-level game theory can be used in different situations. In addition, as previously discussed, this dissertation has added to the complexity of two-level game theory by showing that not all players have to be actively playing the game in order to have an influence on it. The EU is an example of this.

There are several areas stemming from this study that would benefit from further research. The first was mentioned in Chapter 3 and has to do with selection bias. With more time, it would be useful to study the decisions of Mozambique and Zimbabwe to see how each of them made their decision and how the decision-making process plays into two-level game theory. This would allow for a fuller description of what happened, eliminate any selection bias, and leads to the next area for further study, and that is how GM technology is spreading in the developing world, and what the implications are for its spread. This subject has been partially addressed by this dissertation, but merits further attention because of the implications for both the developed and developing world. Following on with this subject, further study is needed on how the differing attitudes and regulations of the U.S. and EU towards GM technology is affecting the rest of the world. This is a large subject and needs to be researched further in future studies.

Using two-level game theory emphasizes that there are multiple sides to decision-making in countries, and that one must look at both the international level and the domestic level to understand it. But the theory goes further than that, because it also explores the interplay between the two-levels, largely through reverberation and win-sets. Knowledge of these mechanisms of

decision-making and attempted influence add nuance and complexity to the discussion of how the decisions in Zambia and Malawi were made, adding greatly to the knowledge of these decisions.

# APPENDIX A

## IRB-APPROVED INTERVIEW QUESTIONS

### A.1 Survey Instrument- Policymakers

*The questions below are suggestive. Depending on their position at the time, not every interviewee will be able to speak with the same knowledge and authority. Some of these questions may not be posed and the interviewee might take the conversation in a different direction--raising new questions altogether.*

Potential questions for interviews with policymakers

Background
1. What was your position at the time of the decision?

2. What were your subsequent positions? (If it's easiest to provide me with your CV, please feel free)

3. What were your perceptions of the effectiveness of food aid in your country prior to 2002?
    a. Did your perception of food aid play a role in your decision?

Decision
4. How was the decision made?
    a. What sort of meetings were held?
    b. If a member of Parliament, were you consulted?
    c. What do you feel were the primary reasons for the decision?

5. On what level was the decision made? Was it voted on in Parliament? Was it a Cabinet decision?
    a. Who did the research on the scientific aspect?

6. Who was consulted?
    a. Scientists?
    b. Other governments?

Pressures
7. Was there pressure coming from organizations outside the government?
    a. NGOs?
    b. The scientific community?
    c. Farmers' or Growers' Associations?
    d. Other organizations?

8. Did you feel pressure from the U.S. or EU?

Discussion
9. Was there talk of future consequences or opportunities if you went one way or the other? What possibilities were discussed?

10. Was there a discussion of possible consequences from the U.S.? If so, what was the discussion?

11. Was there a discussion of possible consequences from the EU? If so, what was the discussion?

12. Were you concerned about future Zambia(Malawi)-U.S. relations? If so, what were the concerns?

13. Were you concerned about future Zambia(Malawi)-EU relations? If so, what were the concerns?

14. Was there a discussion about what would happen to the people who needed the food aid? If so, what was the discussion?

Consequences
14. Has there been a change in Zambia(Malawi)-U.S. relations? If so, what are the changes?

15. Has there been a change in Zambia(Malawi)-EU relations? If so, what are the changes?

Other
16. Any other comments?
17. Do you know of any official sources that I could get access to? Meeting minutes, scientific papers read, official decisions, etc.?
18.Do you know of anyone else I should speak to?
18.May I use your name when I contact potential sources?

## A.2 Survey Instrument- Farmers' Associations

*The questions below are suggestive. Depending on their position at the time, not interviewee will be able to speak with the same knowledge and authority. Some of these questions may not be posed and the interviewee might take the conversation in a different direction--raising new questions altogether.*

Potential questions for interviews with Farmers' Associations

Background

1. What does your association do?
2. How large was your association at the time of the 2002 decision?
3. If you had a position on what your government should do prior to the decision being made, what was that position and why did you hold it?
4. What were your perceptions of the effectiveness of food aid in your country prior to 2002?

Decision

5. Did you know the decision was going to be made before it was made?
6. If so, were you privy to any of the conversation?
7. Did you feel you had any say in the decision?
8. How were you informed of the decision?
9. Did you consult anyone else regarding the impending decision?
10. Do you agree with the decision made?

Pressures

11. Did you have any pressure coming from individual farmers?
12. Did you have any pressure coming from others?
13. Did you try to apply pressure to the government to sway their decision one way or the other?
14. If so, describe your efforts.

Consequences

15. Have things changed in any significant ways since the decision was made?
16. If the same situation was happening again, what would you advise?

Other

17. Any other comments?
18. Do you know of any official sources that I could get access to? Meeting minutes, scientific papers read, official decisions, etc.?
19. Do you know of anyone else I should speak to?
20. May I use your name when I contact potential sources?

## A.3 Survey Instrument- NGO workers

*The questions below are suggestive. Depending on their position at the time, not every interviewee will be able to speak with the same knowledge and authority. Some of these questions may not be posed and the interviewee might take the conversation in a different direction—raising new questions altogether.*

Potential questions for interviews with NGO Workers

Background

1. What does your organization do?
2. How large was your organization at the time of the 2002 decision?
3. How many workers did you have on the ground in 2002?
4. If you had a position on what the government should do prior to the decision being made, what was that position and why did you hold it?
5. What were your functions in relation to food aid/food security at the time?
6. What were your perceptions of the effectiveness of food aid in your country prior to 2002?

Decision

7. Did you know the decision was going to be made before it was made?
8. If so, were you privy to any of the conversation?
9. Did you feel you had any say in the decision?
10. How were you informed of the decision?
11. Did you consult anyone else regarding the impending decision?
12. Do you agree with the decision made?

Pressures

13. Did you have any pressure coming from individuals?
14. Did you try to apply pressure to the government to sway their decision one way or the other?
15. If so, describe your efforts.

Consequences

16. Have things changed in any significant ways since the decision was made?
17. If the same situation was happening again, what would you advise?

Other

18. Any other comments?
19. Do you know of any official sources that I could get access to? Meeting minutes, scientific papers read, official decisions, etc.?
20. Do you know of anyone else I should speak to?
21. May I use your name when I contact potential sources?

## A.4 Survey Instrument- Scientists

*The questions below are suggestive. Depending on their position at the time, not interviewee will be able to speak with the same knowledge and authority. Some of these questions may not be posed and the interviewee might take the conversation in a different direction—raising new questions altogether.*

Potential questions for interviews with scientists

Background

1. What was your position at the time of the decision?
2. What were your subsequent positions? (If it's easiest to provide me with your CV, please feel free)
3. If you had a position on what the government should do prior to the decision being made, what was that position and why did you hold it?
4. What were your functions in relation to food aid/food security at the time?
5. What were your perceptions of the effectiveness of food aid in your country prior to 2002?

Decision

6. Did you know the decision was going to be made before it was made?
7. If so, were you privy to any of the conversation?
8. Did you feel you had any say in the decision?
9. How were you informed of the decision?
10. Did you consult anyone else regarding the impending decision?
11. Do you agree with the decision made?

Pressures

12. Did you have any pressure coming from individuals?
13. Did you try to apply pressure to the government to sway their decision one way or the other?
14. If so, describe your efforts.

Consequences

15. Have things changed in any significant ways since the decision was made?
16. If the same situation was happening again, what would you advise?

Other

17. Any other comments?
18. Do you know of any official sources that I could get access to? Meeting minutes, scientific papers read, official decisions, etc.?
19. Do you know of anyone else I should speak to?
20. May I use your name when I contact potential sources?

## A.5 Survey Instrument- Civil Servants

*The questions below are suggestive. Depending on their position at the time, not interviewee will be able to speak with the same knowledge and authority. Some of these questions may not be posed and the interviewee might take the conversation in a different direction--raising new questions altogether.*

Potential questions for interviews with Civil Servants

Background

1. What was your position at the time of the decision?
2. What were your subsequent positions? (If it's easiest to provide me with your CV, please feel free)
3. If you had a position on what the government should do prior to the decision being made, what was that position and why did you hold it?
4. What were your functions in relation to food aid/food security at the time?
5. What were your perceptions of the effectiveness of food aid in your country prior to 2002?

Decision

1. Did you know the decision was going to be made before it was made?
2. If so, were you privy to any of the conversation?
3. Did you feel you had any say in the decision?
4. How were you informed of the decision?
5. Did you consult anyone else regarding the impending decision?
6. Do you agree with the decision made?

Pressures

7. Did you have any pressure coming from individuals?
8. Did you try to apply pressure to the government to sway their decision one way or the other?
9. If so, describe your efforts.

Consequences

10. Have things changed in any significant ways since the decision was made?
11. If the same situation was happening again, what would you advise?

Other

12. Any other comments?
13. Do you know of any official sources that I could get access to? Meeting minutes, scientific papers read, official decisions, etc.?
14. Do you know of anyone else I should speak to?
15. May I use your name when I contact potential sources?

# APPENDIX B

## INTERVIEW TRANSCRIPTS: ZAMBIA

### B.1 Richard Chanda

Dr. Richard Chanda, Lead Scientist, Seed Certification and Control Institute

Protea Hotel, Lusaka, Zambia, 8-23-16

MB: Ok, so you're Richard Chanda

RC: Yes

MB: And what is your position currently?

RC: I'm the acting principal research officer of the Seed Control Certification Institute

MB: And what is your background?

RC: My background in terms of work history and so on. After I finished my first degree with the University of Zambia I worked as an agronomist with Zambia Sugar. And I think I was in charge of about 500 hectares of cane, ensuring that it's growing nicely, and the proper yield and qualities that would be fed into the factories. And then at the time I was done with sugar, the conventional ratio was 8 tons of cane to 1 ton of sugar. Yes, then from there, the job was routinized basically, because when they cut cane, it becomes more routine. And so I think the company was not allowing me to go for studies at that time. Thus I joined a private company, Steelco was part of a group of companies. That was held, the owners were the Indians…[irrelevant chatter]. That's where I worked for some time. I was laid off and at that time I decided to join the government. So I was hired as Seeds officer and since that time I have been raised to Senior Seeds Officer and I was attached to the section that is involved in variety registration and testing limit section.

MB: Ok

RC: And over time, they, we have evolved to the extent that we have also attached other duties, now we can do protection because we have the Plant

Breeders' Rights Act. So now are also administering the Plant Breeders' Rights variety registrations and protection and testing.

MB: Ok. Plant Breeders' rights act. Ok, and what was your position in 2002?

RC: Ah, can I remember in 2002? Yes, in 2002 I was seeds officer.

MB: Ok. So, were you involved in any way in the decision as to whether to accept or reject genetically modified?

RC: No I was not involved at that time.

MB: Ok, what do you know about that decision?

RC: What I know about the decision and the contact that I had at that time when, it's like when the late President Mwanawasa said we didn't need GMOs there was a lot of noise, others for, others against, and the person who talked to me personally, he was amongst the team that was identified to do a study to the U.S.A. I don't know which city they visited, but he told me they were going to the U.S.A. to learn more about GMOs.

MB: And the conclusion of that team was that GMOs were dangerous?

RC: Ummmm, according to, if my memory gets me correct, I think the talk at that time was to follow the Cartagena Protocol, which talks about the precautionary principle.

MB: Mmhmmm. Ok

RC: Implying that we need to be, we need to apply precaution, that was it, implying that it was not a definite no, nor a definite yes, but precautions can only be done when the person has accepted that all issues he has raised have been cleared. If they haven't been cleared, he will not.

MB: Ok, I understand that.

RC: So that's it.

MB: Ok. Did you know that the decision was going to be made before it was made?

RC: I didn't know.

MB: You didn't know. Ok, and who's the person you were referring to on the committee, on the team, what's his name?

RC: The one who supervises me, at my working place?

MB: Mmmm

RC: Is Dr. Francisco Metye.

MB: Ok. Ok. Let's see. What do you think were the main reasons for rejecting the GM maize?

RC: In my own view I think the main reasons that, this I discovered after time, after study, just thinking, is because of the information. And I would say it's us scientists who are to blame. Because when you for example, are breeding, and come up with a good variety, it's me who knows the details of what I've done to that. Now when I come to the market instead, I need to be careful to transmit information. So they're so sure, companies that think of us, and in every situation whenever there is a crisis that has happened, it's not the technical or the normality or the theoretical, if there's social issues that come in, it overrides. For example, you can have a situation where I've got a plot, and somebody has encroached and for example he has built up a structure and he has a family. And the court rules that it's my property and I need to bring it down. Finally I'll bring it down. Now, the social component of it is going to raise more dust than the legality. And everybody say, how can he do such a thing, he's got no human heart, blah blah, all those things. So the moment the GMOs started into the social, just know now that there is confusion that arises.

MB: So you think that the social is that people believed it was bad for them?

RC: Yes, and people talk about, no, how can you take genes from a fish and put it into maize, and also the reactions to this and that and that

MB: So they were given both not enough and too much information?

RC: That's it.

MB: Yeah, yeah. But why, so I was just in Malawi doing research and their argument was that people were going to starve, now isn't that another social issue that should have come into play?

RC: That would have been a social issue that could have come into play, but in the worst case scenario, when you look at the national reserve, because he was the President so he has information at that time about food security, and other options that are available to him. But thereafter we never heard of any report that because we made this decision that that happened.

MB: Ok.

RC: Yes.

MB: And what about, was milling an option, was that an option that was considered?'

RC: I think that was an option that was considered. Later on there was talk to, should we bring in grain, or should we bring in milled? But I think form what I heard what was more preferable was grain, I mean was in powder form, than in

grain, because they said in grain people may decide to plant and that is going to create more work. So milling it was more better.

MB: But they decided, even milled it was not going to work. Because it would make people sick is what they believed.

RC: Exactly. The challenge that you have is when the head of health says no, even if he has said no, only for this particular, it is, there are all those people who tend to ignore the information, for whatever reason. As soon as they hear it's the president who said it, even they will start moving up and down.

MB: Did you agree with the decision?

RC: At that time I agreed.

MB: K

RC: But what I accepted is that it was never said, not GMO research

MB: They didn't ban GMO research.

RC: No, it was not clearly put. But personally and scientifically my view was we weren't in control of GMOs, to detect whether GMOs were coming into the country. So we weren't in charge. So for me, I think that when you are doing research you are being defensive when you say no, and you are doing quality control, but you are also having an opportunity to respond, in the event that they find. So and in our findings, when you as a scientist you find that GMOs do not have these reactions, I say ok fine, in my own research I have reactions, therefore I have now counteracted yours. And subsequently we have two conflicting ideas, then you have to come together to come to consensus on what is true.

MB: Now, there is a drought in Zambia now, so it is possible that Zambia will be in the same position it was in 2002. What would you advise now?

RC: No, currently yes we have a drought, but we have declared that we will have enough food.

MB: Ok then let us speak hypothetically. Let us say that the drought continues and you run out of maize. What would you advise now?

RC: What would you advise, hmmm.

MB: As an expert in your field.

RC: Since you have asked me hypothetically I will answer hypothetically. To use what we have experienced this year as a basis to what the future is, then the answer will be different. Because, I'm saying this because even people who have come from Zimbabwe and Malawi, they confirm that Central Africa has a drought, but Zambia has excess maize.

MB: That's amazing

RC: Yes and that's why at some point maize was being exported to Malawi and to, to, to Zimbabwe. The government offloaded the maize that it had in FRA to try to push the price of mealie meal, because that was the outcry at that time. However,

MB: This happened this year?

RC: However, it looked like some millers, instead of doing what they agreed, started exporting the maize.

MB: So then that could cause a shortage here?

RC: So it means that here we had enough to feed ourselves. We have enough to feed ourselves. Now, if you ask yourself, how did Zambia come up to this? It's because last year there was a prayer that was made. Yes. So it implies that if our having adequate, we have realized that we cannot solve this and God has helped us, it means even this year we can do the same and God will still answer us.

MB: Ahhh

RC: So, it means in the future, it will not happen

MB: Ahhh.

RC: So if you are going to the bible, I'm assuming you read the bible.

MB: Yes

RC: There was a dream that came before Pharaoh, and he was told you were going to have five years of lean, and five years of what?>

MB: Plenty.

RC: Yes, so it's this component that we lack in our government system. Implying that if you read Romans chapter 13, every authority that is here is distinct by God, it's God that put it there. But the challenge that we have is that this authority does not ask God, such that when the dream comes to say, the next 3 years you are going to have a bumper harvest, but there is no guarantee that it will continue, so prepare for it. We do not have that.

MB: Ahhh. Ok.

RC: And this is why God has demonstrated for the country of Zambia that when you pray, yes, things may still be bad, but it will not be as bad as if you didn't pray.

MB: Ok. Ok. Alright.

RC: Yes. Paul was going to another place and had a shipwreck, but God told him that no, you are going to suffer loss, but no one is going to die. So let's assume that hypothetically we had a drought, we have several options that are open for us which we can do against that drought. And the several options we looked at what is available. What we can better do is to make sure people are informed. What is key is for people to make decisions from the information that they have. When you have a lack of information, then you have people being manipulated here and there. So the key point here is that we set up structures that are going to be informing people of what they are going to receive. So in the even that you are at the point of dying, it triggers the issue of survival. You have heard of people that are in plane crashes, and because of the desire to survive, they start eating other people. And that case came before the court when they were discovered. And the judge just said no, in that situation, the present precarious situation. So the mode of survival comes in, and when the mode of survival comes in, the judgments are subdued.

MB: Ok. So if it came to true survival...

RC: If it came to true survival, that's when the mode comes in. In that case you can even eat a dog, a chicken, whatever comes in.

MB: Or GM maize

RC: Exactly, if I eat a dog, the Chinese eat dog, so what makes me think I will die? That's then the…start flowing in. For GMOs you ask yourself, which countries have brought in GMOs? Have they died? No, so why should I think I will die? But for you to compare you need to have information. For example now we can ask ourselves, which country has accepted GMOs, and then we should follow the statistics. It's from there that now you can infer to say, if it has happened to them, if it doesn't' happen, why should it happen to me? So you use inference. And for us to use inference, we need information. Then it's what my heart tells me to do now, that's what I will do.

MB: Because there's still, even 14 years on, most people believe that it's bad.

RC: Yes

MB: What do your studies tell you?

RC: My research, I have never carried out research here in Zambia, so what I know is published research, and people can say, maybe this is propaganda, and so on. And that's why me I say, when you do your own research, you are far better off. Because if I expose this to the people who are the so-called, these individuals who are against, they will say oh it is just sponsored by this, they just want to convince us.

MB: So do you see any softening in the government's position towards

genetically modified food?

RC: There is nothing that stands forever.

MB: OK.

RC: Yeah.

MB: Are they a little more favorable than they were?

RC: The moment we set everything right as scientist we start speaking nicely to them, we address their concerns, then we start speaking together. Once they become part of the solution what should make them against? So we should, then, it's not like we're working in isolation. We should work together with them, they are our bosses, so they should tell us what to do. When they have information what will make them to say no? There is nothing forever, everything comes and goes.

MB: True

RC: Everything comes and goes.

MB: Yes, it's very true.

RC: We were a one party state for a long time. Yes, for 27 years, and things changed.

MB: Because everything changes.

RC: Yes.

MB: OK. Any other comments?

RC: No, there are no other comments, except to say that I'm happy you were carrying out this research and I wish you the best.

MB: Thank you.

NEW RECORDING BECAUSE THE CONVERSATION CONTINUED

MB: Were a lot of these acts passed because of the situation in 2002? Was there any regulatory structure before that?

RC: There were no regulatory structures before that decision in terms of, for the biosafety. Yes, but I know that something was happening underground.

MB: OK, so they were kind of anticipated what was going to happen?

RC: Yes. When I joined the seed Control certification Institute in 1999 I found it there.

MB: Ah, it already existed.

RC: Yes it already existed there everything was formulated. We even engage the lawyer and were involved in this, but you know, I don't know for whatever reason, when you take it to the legal section, it takes a long time. So I believe that the issues with GMO's were somewhere, it just never came up.

MB: OK.

RC: So that like even the Plant Breeders' Right Act, even if it was passed in 2008, I have been working with that since 2001. I drafted the regulations, I drafted everything.

MB: And it took that long?

RC: I was like a secretary. Until someone came and finished it up.

MB: Well, seven years seems about reasonable.

RC: Yes.
[Both laugh]

## B.2 Beatrice Chola

Mrs. Beatrice Chola, Founder and Executive Director of Bwafwano Community Services in Chazanga compound, Lusaka, Zambia

Bwafwano offices, July 7, 2016

MB: Ok, The government said no, we don‘t want the food, because it has been genetically modified

BC: Yes

MB: Do you remember that decision?

BC: I remember that decision here in Zambia, yeah

MB: Were you receiving food aid at the time?

BC: We were receiving food aid at the time.

MB: Ok

BC: At the time we are receiving when we discovered that Mothers Without Borders had given the pots and plates so we had something to cook in. Let's give them food.

MB: Ok

BC: Yeah

MB: Ok. Did the food stop because of that decision?

BC: The food stopped because of the decision

MB: Ok. Did you have any say in whether that happened? Did you talk to anybody about that decision?

BC: Yeah, we talked to the manager for World Food Program

MB: Ah

BC: Even came here. Coming to see what this food, the problem, the food do, the problem with stopping

INTERRUPTION

BC: Yes, they even came here to see where the food go which you have stopped, but it's going to affect the communities, especially those who are taking care of the children

MB: Uh huh. And so you spoke to the manager of the World Food Program

BC: Of the world food program. The problem talking to the manager how it is

going to affect the children. But they said that the government said that they cannot go on with the food which is, which is uhhhh

MB: Genetically modified

BC: Genetically modified.

MB: Mmm hm

BC: I said you cannot because it will bring a lot of illness to the people. Yeah and if it is not taken care of there most of them are positive, so maybe it can affect them more

MB: Aaahh, because they were already sick

BC: Yeah, because they were already sick, it would affect them more

MB:And did you, did you get a chance to talk to anybody besides the WFP?

BC: MMmmhmmm

MB: Who did you talk to?

BC: Oh to talk to them concerning why they had stopped?

MB: Yes

BC: Well I had to go to UNICEF to find out that

MB: UNICEF?

BC: UNICEF. Because they are the ones who are…..I didn't know it was going to affect the children, but the goodness of uh the food was that the children were concentrating in the class

MB: Uh huh

BC: And they attend. So them coming to the school had improved very much. Because even if they were taking care of their siblings, their mother was sick, they were not eating well, these people are poor

MB: Uh huh

BC: Because they were staying without eating.

MB: Uh huh

BC: So having food here, the children started coming to school because there was something to eat. And when they eat their food, they can concentrate in school

MB: Yes. Yes

BC: They were not even staying away from school. So that is the benefit of the food. And this is why I had to go to UNICEF to complain. Now they have stopped this, the children are not coming to school and so on.

MB: Uh Huh

BC: And so this is when Cecily's Fund came in to help.

MB: Ah, Cecily's Fund

BC: Yes. Because they are the seeing good results of it.

MB: OK

BC: But the World Food has stopped, now we can work with them. So Cecily's Fund came in.

MB: Ok, so in your case you had someone step in to bring the food

BC: Yes, because of the way I was moaning and complaining. So it made others to know that I'm complaining because of the good results I had seen because of this food

MB: Ok and so was the WFP manager telling you about that, was that the first you heard about the decision? Or did you know that there was a decision?

BC: I knew there was a decision because it had been talked in the paper

MB: Ok

BC: Uh huh. Yeah they had talked in the paper, trying to discourage it in so many ways..

MB: The papers were against?

BC: Yeah, they thought it was going to give us for a lot of fellow Zambians said there is no reason for us to keep taking this food which is modified in such a way

MB: Uh huh. So did you, you disagreed with that decision, the decision to reject the food?

BC: Yeah, I didn't disagree as such, but I had to complain the effect it was going to cause in children, now to stay away. For them to stay away from school.

IRRELEVANT INTERRUPTION

BC: So, this is what I thought, that no, yes you are saying the food is bad, but to me I have seen the good of it.

MB: Mmm hmmm

BC: It has made the children to come to school and so we have seen the good of

it. But the effects are good on the children. It had affected them very much

MB: So you were concerned about how genetically modified food would hurt the children?

BC: Yes, I didn't know about it but when they explained and they said well maybe this is the reason why it would hurt the children.

MB: And was it the papers that explained that it was bad? Where did you, where did you, how did you know that?

BC: They are just criticizing it. They were just criticizing that the food was not good.

MB: Ah, and who's they?

BC: The government had started criticizing it,

MB: The government?

BC: Yeah, that we could not be eating the modified food, it's going to affect the people and so on and so on. So this is how they stopped but by then it was in the country almost five years.

MB: Oh

BC: So when the contract ended they would not renew the contract because they say no, the modified food is not good, not good, you know there are all sorts of things out of it.

MB: OK. So you were very lucky that you had Cecily's Fund

BC: Because of my movements

MB: Yeah

BC: Because of my cry

MB: If you hadn't protested

BC: Yes, yes, the children, I didn't want them to stay away, because knowing what was happening in the community, others were now going in the street, these kids, the children will be like that, I said no, something must be done

MB: Mmm hmmm

BC: and it's not me, they even found me the donor themselves. Even USAID again

MB: USAID found you Cecily's Fund?

BC: Yes. Project Concern International, they are under USAID. They are the

ones who found me Cecily's Fund. Because of the very complaint

MB: Ok ok. So probably there were other organizations like yours that if they didn't complain they didn't get the food?

BC: Yeah, there are even now, they are not getting the food are, mm hmm, they didn't complain, maybe they are not concerned, they said, well the government said, and they left it. But me, I'm so concerned that these children stay away from school. This is what I want, I didn't want

MB: Yes

BC: That they go again in the communities they will start leaving their parents when they are hungry, they will go in the street. Starting from 1990s, we had a lot of children in the street because they were running out from their parents tey go and beg in the streets for them to eat. So this is what I didn't want. So I had to complain. Then they say the food is modified, find me someone who should keep on feeding my children so they don't, you know, stay away from school

MB: Yes

BC: And they found me that donor. For quite some years now. Since the food went, I've had that donor to date

MB: Wow, that's very nice

BC: Yes

MB: That's very nice. Um, what else. (laughs) I don't have my papers with me, so I'm trying to think what I need to know

BC: Yes

MB: Um, will you, your name is Mrs. Chola, and this is Bwafwano in the Chazanga compound

BC: Yes.

MB: Ok. And you started this in 1990

…Background info

MB: Um, one more question, just going back a little bit, when you spoke with the WFP and UNICEF, did you, did you think they were going to speak to the government and maybe pressure the government to change their minds and say no, we'll have the food?

BC: Well, they tried very much. They tried very very much to pressure the government so they can still come back for that, but I'm sure they have been given, they were given some time and for the time being let's see what is

happening and then when we see that the food is not modified, then we'll bring some back.

MB: I see, I see

BC: You only worry, the government really worries, the modification, modified food, they think it might be harmful to the people, the patients. Because the food comes specifically for the patients, it's not for the general community, no.

MB: And what did they think it would do them?

BC: Well, they were sort of, they think it would affect them in more ways since their immunity is low already.

MB: Ok

BC: Yeah, uh huh

MB: So they were more at risk if they were sick

BC: Yes, this is what they thought, uh huh.

MB: Ok. Alright, well thank you Mrs. Chola

BC: Thank you very much, and so, this is how it is.

## B.3 John Deloko

John Deloko, Aid Worker, Save the Children Zambia

Save the Children offices, Lusaka, Zambia August 26, 2016

Save the Children- we were not consulted, it's outside of our mandate to protest or question.  That is the province of the government

## B.4 Doris Musonda

Doris Musonda, Chief Executive Officer, National Biosafety Authority

National Biosafety Authority  offices, Lusaka, Zambia 8 -31-16

MB: So your name is Doris Musonda.

DM: Yes please

MB: Tell me your position

DM: I'm the registrar as well as the chief executive office for the National Biosafety Authority

MB: And what does the National Biosafety Authority do?

DM: The National Biosafety Authority is a government agency which was established by the Biosafety Act, to regulate all issues that pertain to GMO issues in Zambia. Or basically in biotechnology.

MB: Ok, umm, and I don't know if I told you the background of my research. I am looking at the decision in 2002 to accept or reject GMO food aid. And I'm looking at both Zambia and Malawi because they made opposite decisions.

DM: Ok

MB: Even though they were in similar positions, so I've been in Malawi and now I'm in Zambia just kind of asking questions and trying to figure out how the process worked and how the decision was made. I'm not judging the decision in any way, saying one was right and one was wrong. That's beyond my scope.

[Both laugh]

DM: I am grateful.

MB: So, um, so the decision was made in about 2002, finally, yes? What were you doing in 2002?

DM: In 2002 I was working for an NGO. Yes, yes. But um, I was aware about the GMO issues and the GMO discussions and I think later on where I was working, we did organize an international meeting concerning the GMOs.

MB: What was the NGO called?

DM: It was called Program Against Malnutrition. The background as far as I know was that when we started to know or to learn about the GM technology, or GMO as it was known at the time, technology, I think it was brought in with a lot of negativity. I don't remember that time hearing much about anything positive except that it could increase yields, especially for crops, but apart from that time I do not remember, maybe I did hear, but I also considered it mostly negative, but I

think the fear was about the dominator gene which could compromise the seeds in the country, because we were informed that if our GM crops were grown then and they cross-pollinated with our local varieties, that would be the end. Yes, yes, so I think that was quite scary, but also there was a lot of fear that they cause cancer, and different diseases and everything. So I think that it was from that background that when it came the Zambian people were not comfortable when the GM maize was presented. But the government took that position as far as I know because after analyzing the research that was associated with the GM grain, which was actually a living modified organism because certain living…the government felt that we didn't have the capacity to handle GM, GM living materials. In terms of human resources, I think by then most of us knew of GM technology, but not many of us had learned about it, but also we didn't even have the legal framework to regulate or do anything about the GM materials. So the government felt it was safer to reject the maize in order to protect the country, and especially the biodiversity and seed, to be specific. But I think on the other hand, I'm not too sure, maybe checking the documentation, I think the government was open, from what I heard, to receiving maize grain which was milled into mealie meal, because then that could not be replanted. Yes yes. But that was impossible because the donor country didn't start to do that. So the final thing was just to reject the maize.

MB: That's interesting, Malawi had the same, some of the same issues with GM technology and they chose to have it milled before it came in, but I think they did it at their own expense

DM: Yes of course.

MB: So yeah, that would have been different. Ok, so at this time there was no regulations or acts, or there was no framework in place, right?

DM: No, no policy.

MB: So the, the Biosaefty Act, is that what it was called? Was that signed in 2008?

DM: 2007

MB: 2007. do you have a copy of that?

DM: Yes I do.

MB: Ok, when we're finished I will give you my email and if you could send that to me that would be wonderful.

DM: Yes yes. No problem.

MB: Ok, so um, are, you're a scientist by training?

DM: Yes, I am

MB: Ok, and how much study is being done on GM technology now? In Zambia?

DM: In Zambia, I would say it's fair. But no, you mean experimenting with these, or just learning the science?

MB: Ummm, let's do learning the science and then experimenting.

DM: Ok. Learning the science I think is fair, because the University of Zambia and the Copperbelt University, and probably a few private universities are teaching, are offering courses on biotechnology. They are. And then we have a few labs which are interacting with this technology and trying out a few things here and there, so I think I would say it's fair in terms of training. We have some upcoming biotechnologists, yes. But in terms of research, I'm not aware officially that anyone in Zambia is doing any research. No, we do have two applications though in the NBA where people want to conduct research regarding GMOs. But these applications are not yet approved.

MB: And any applications come through your office?

DM: Yes. Yes. One was recommended for approval, but the applicant put it on hold, so we are waiting. Even the other one was put on hold by the applicant, but then wasn't almost approved. There are other, I think, other the different departments need to meet with agencies and administrators, so they put it on hold. So those are the two which are in the pipeline. Apart from that I'm not aware that anyone is doing any, if they are there, then they are doing it illegally.

MB: Oh. No good.

DM: But then before we go on I can explain how we transitioned from non-GMO maize to the policy and the legal framework.

MB: Please do. Yes.

DM: I think after that incident did realize that we needed to put in a legal framework in order to protect ourselves because we realize that GMO materials had come to stay and it was like the whole world was moving with it. So if we didn't have the legal framework then people would just be free to bring it in. so Zambia did put together a taskforce to study what was happening on GMO and GMO migration around the region and in other countries beyond the region. So that time they went around and learned what was happening and the legal frameworks they had in place. And then we started drafting the policy, which was in I think in 2003, and then from there they turned it into in the Biosafety Act in 2007. After that then there was the ….instrument for food ingredients and policy in 2010. That's how we have developed that position from the legal framework.

MB: Ok. Great, great. Um, going back to the decision in 2002, how were you informed of what was going on? Was it through newspaper, was it government announcements? Do you remember?

DM: I think what I remember was just through the press. I remember that the minister did address the nation through the press.

MB: And was the press pretty uniformly negative?

DM: Ummmm

MB: What I'm asking is was there anyone pushing for acceptance?

DM: No, not for acceptance, not that I can remember.

MB: Ok

DM: I think generally, I think Zambia has been anti-GMO. I think the majority was at that time, and um, issues of GMOs in Zambia are quite emotive. People view it with a lot of emotions, especially anti-GMOs. So I can't remember quite well, but I think it was generally against.

MB: And um, should, so you're in a drought now.

DM: Pardon?

MB: You're in a drought now

DM: No, not really, but we didn't have very good rains.

MB: Ok, then let's speak hypothetically for a minute. Suppose there were a drought and there were to be severe food shortages again.

DM: Mmhmmm

MB: What would the National Biosafety Authority recommend?

DM: We would recommend that the grain can be brought in and then can be milled and then given to the people. I'm assuming that government would solicit our opinion. So we would recommend that the grain would be brought in and milled because if it is milled then you really can't have a problem with a prospering nation. But I think it's still the grain or the mealie meal would have to be assessed for food safety. But the law does provide for assessment. Somebody even now, if someone wanted to do research, to walk in here with materials, whether in crops or medicine, whatever, they are free to do so, they just need to apply for a permit and then the application goes for assessment. If they are at a scientific …committee then the National Biosafety Authotiryt can determine that it is by and large safe. So I think we can recommend that the grain can be brought in and milled, because then I think there will be no one applying for, for growing it. So it will safeguard.

MB: Ok. I know that there are a lot of beliefs surrounding GM food as to its harmful effects. Do you think it would be eaten? Would that be a problem?

DM: Ummmm, I know people do talk about these negations, so to say, and um, there are quite some strong groups which claim…yeah, but um, I'm sure if the grain was sent to Risk Assessment and then certified by the Biosafety, I'm sure it would be accepted, though not by everyone.

MB: Ok, that's good to know. Ummm, let me just make sure I've asked all of my questions. Ok, any other comments?

DM: Ummm, I think in Zambia the …of GMOs has sort of…In spite of having the Biosafety Act in 2007, then the National Biosafety Authority was not at the center. Yes there was an interim secretary that was consulted and I'm sure that at first there was one or two people just to do one or two things and then the board was only appointed in 2013, and the Permanent Secretary was appointed in 2015. So the implementation of the Biosafety Act has lagged behind. So a lot of people in Zambia do not know about the legal framework that exists. A lot of them don't even know the National Biosafety Authority exists in Zambia. So their reactions are still, can still be, they don't still make friends with the law. A lot of them will base it on the announcement when we rejected the GMOs. They will just say, no we don't take GMOs because the late president, may his soul rest in peace, banned the GMOs. But the same president who rejected that grain is the same president who signed the Biosafety Act. Yes yes, when he was still in office.

MB: This was Mwanawassa?

DM: Yes, Mwanawassa. So a lot of people don't know about the legal framework and don't know about the existence of the NBA so their reactions are quite reactive and quite emotive, so we need to raise awareness about the legal framework so they know their interests are protected. Yes, yes.

MB: You have some marketing to do.

DM: Yes, a lot actually.

MB: Very good. Ok, my final question is, do you have any documents that you think might be useful for me? We spoke about the Biosafety Act, but do you have any others?

## B.5 Yande Mwape

Yande Mwape, Program Officer Disaster Management Affairs, Office of the Vice President

Office of the Vice President, Lusaka, Zambia, 8/29/16

YM: It wasn't just GM food aid, but all GM food

MB: What was Disaster Management's response to the famine in 2002?

YM: We didn't import any food, we were able to use our strategic reserves. In addition, we started a maize project with the help of the World Bank. It included growing maize and many other projects. I have the proposal

MB: Do you have it electronically?

YM: I will see.

## B.6 Robert Sichinga

Robert Sichinga, former Member of Zambian Parliament, former Minister of Agriculture, former Minister of Commerce

Residence, Lusaka, Zambia, 8-24-16

MB: So your name is Robert Sichinga.

RS: Yes, my name is Robert Kenneth Kaponda Sichinga. I am a former member of parliament, I was the Minister of Commerce, Trade, and Industry in the Sata government, from 2011 to 2014, end of 2014, although it carried on into 2015. I've also been a Minister of Agriculture in Sata's government. So I've been a member of parliament for 10 years, in the opposition, then I was a minister of government for 3 years under the Betreuidg and then Mr. Sata. Since then I'm out of that government.

MB: Ok, and what was your position in 2002?

RS: My position in 2002 was that of a member of parliament for Kafue constituency for the United Party for National Development, UPND, in Kafue, which is 50 kilometers south of Lusaka.

MB: So, ummm, at the time of 2002, what were your functions in relation to food aid, the drought, all of that?

RS: Well I didn't have any direct responsibility for it, suffice it to say that as a legislator it would be part of my responsibility to monitor what the government is doing and during that time I was chairperson I believe of Education, Science and Technology. If not, it would have been one of government assurances or delegated legislation and because of that it meant that I had responsibility or oversight over the executive, as it were, in the committees of parliament. OK, and therefore any policies that the government would be pursuing, I would be interested, obviously, because as a legislator it is important that we take a position, especially if you were in the opposition and I was in the opposition, I was almost a de facto leader of the opposition. So because of that to my responsibilities were to ensure that the government was doing the right thing.

MB: OK. And can you explain the process of how the decision was made?

To?

MB: To reject genetically modified food aid?

RS: Most of this was carried out within the executive realms. And I was not directly involved in the initial aspect of that. However, as I've indicated to you already, that is a legislator our interest was that as I recall very well that we had gone to Chamanuka to hear the arguments in favor of genetically modified

organisms Buy some of the scientific, you know, shall we say six, subscribers, who felt that we should, we should accept genetically modified food aid which was coming from the United States. So they were making their case about what genetic modification was, and this obviously came on the heels of The debate on the government's decision to reject the genetically modified food that was being offered by the United States. I can also recall that the United States government itself had organized, the embassy had organized these kind of individual, this particular lobby that was for genetically modified, especially the official side of the embassy was basically justifying the fact that the aid was justified because we needed that assistance and there was nothing wrong with that food, Americans were eating it and why shouldn't we eat it? Basically that was the kind of argument. So these scientists were brought in to give that version, if you want to, and D's for local as well as some of the foreign scientist that were putting forth the argument. And I do know that, from my recollection, that Monsanto was one of the companies that was deeply involved with the modification, although not directly addressing The parliamentarians, I think they were finding other means to put their case across, so to say. And so that is that workshop at Chamanuka was intended to educate us, in inverted commas, to educate us about genetically modified organisms.

MB: OK, so was the involvement of Monsanto an advantage or disadvantage? How was Monsanto viewed?

RS: Well, Monsanto is viewed in here, we talk about not only a scientific position we also looked at the other side, the economic the long-term economic implications of that. And also…

MB: And what did you feel the long-term economic implications was?

RS: But also well the aid was needed, the question was, was this not going to tie us completely to Monsanto as the supplier of the seed? And you must understand that as far as Zambia is concerned, the most research that has gone into seed reproduction has been basically to improve, OK? This is derived to improve the seed varieties now and even the yields as it were, that's where the research has been centered. It has not been centered on genetically modifying the seed. Now, if you look at it from the point of view of a legislator, what would be the implication of accepting the genetically modified commodity? One, our concern was that we did not have the technology to, to, to verify the claims that were being made about genetically modified organisms. And the question was, how will this impact on other seats? How will it impact, because obviously the maze was not going to be grown in isolation, it would have indications for the other crops around it, meaning that if you genetically modify, you would have to rely on the source of your seed. Now, you need to know the cultural background of this within our own country, that the way we've kept seed is that once you've harvested, the practice has been to take the best, all right of the cobs of maize, without getting it into a grain form, and what they do is they put this above the

fireplace in the hut, OK? So that the smoke would prevent weevils and other insects from invading that which you put aside as your seed for the next season. That's how the practice has been, for every commodity, it was put aside. Now, meaning that you picked the best cobs that you had, so that you could have a similar yield. There were qualities in, for example, in the maize seed that we do not find in the current varieties, even the ones that have been done in terms of improving the sweetness of the cob, because part of it was that people use to eat most of it, even now they do that, they eat the cobs while they're just ripening, as green maize. They would roast it, they would toilet, for their feeding. Normally by that time they are, their bins would be running out of the grain that they kept from the previous year, so normally whenever the food ripens, the practice was that you went to the chief. The chief would be the first person to eat of the fruit, and so there would normally be prayers for the harvest that would start. You cannot eat, whether it's pumpkins or beans or whatever, until the chief had done that. So that was kind of the practice, and of course the, the storage would follow thereafter once the harvest had taken place. So this was the practice and so, for us as legislatures the question was, if you therefore decided you're going to go for genetically modified commodity seed, what would be the implication of that vis-à-vis the ability of the, for example, the residents to purchase that? And then the receipt issue, where would you buy it from? You could only buy it from one supplier, and what would that mean? That would mean the supplier to charge any price, so you become dependent on that. Surely that would not be an acceptable situation for any country. You know, you become dependent on any country to provide seed, it would mean that your food supply is really restricted to that country. Politically that's unacceptable. And then the other thing was that there was tremendous amount of pressure from the embassy officials of that day. And the question was, why were they pressurizing us if it was so good that it would appear on its own? Why were they doing that? So clearly it created suspicion to say well, you want to do this, and you need to understand the issue of HIV aids was said to have been an American generated strategy to limit or to cause this diseased to affect the African population. That is basically what it was, so clearly the relationship was that of great suspicion, that was this another method that they want to use to limit the quantity, the population, the growing population of the Africans, and therefore restrict their capacity and ability.

MB: Would you like a drink of water?

RS: No no, I'm just fine.

MB: Do you, that just put me off my train, what was I going to ask? Was there a suggestion that if the grain was milled before it was distributed that that would alleviate the problems?

RS: There was that suggestion as well in the sense that the question was the impact it would have on other crops, that they would be growing around it if it would have been grown. So by milling it before it arrived in the country, it was an

attempt to say, look if it's milled, then it won't have that effect. But I think that issue was not just of the impact it would have on other crops, the issue was what would be the impact on the body? What does this entail? I think it's important for us to appreciate. So whether it was milled or not milled is neither here nor there. The issue was that, why was this genetically modified organisms of maze being pushed on us was this genetically modified organisms of maize being pushed on us, literally push down our throats, and people really get irritated, some of the officials, the American Embassy officials would really get irritated, saying this tomato you're having maybe modified, and that was not the issue, our seeds called hybrid seed. Basically, you know which one gets approved and not approved, mostly to enhance the yields. That's basically what we rely on, and there's enough technology here, in fact Zambia was exporting to the region. So from that point of you, you also need to recognize that there was an economic consideration as to what do you do if you rely now on a foreign country, a foreign company which is located in a foreign country, to control your seed supply? And then there's the cost of course that is involved in, as well.

MB: Was there any talk about future trade with, say the EU, with the EU so firmly opposed?

RS: I don't think the EU came into it, you were seen as a part of the group that were also in the same situation, had rejected the GMO's

[Interruption]

MB: OK, so the EU didn't really come into it?

RS: You know, the EU was simply seen as another country, or another block that had rejected GMO's, and the question was where they in a better position than we were scientifically to understand the implication of this? But I don't think the issue was even asking the EU to come and assist us to understand the genetic part of it, because I think the political and the economic consideration we already had were strong enough we didn't need the scientific component. It was essentially, the argument was that you cannot rely on another country for the security of your food. That was the major argument.

MB: Yes, and it's a powerful one. What about internal pressures, such as from civil society, I know that, I've spoken with the head of an NGO Who said they were quite upset at the decision and went to the WFP to try and pressure them to pressure you.

RS: I think you need to understand that most of the NGOs and the CBO's were normally driven by similar organizations outside the country, so for example, those that were pushing that, did they have scientific know how? Did they have the political consideration, did they understand that, or were they simply used as to us to make this case?

MB: OK.

RS: So basically the NGOs do not have an independent position, as it were, where they have the capacity to undertake research on this scientific analysis, and so on and so forth, or even economic analysis. They don't have, they rely almost entirely on what is being said to them from their sponsors. Now if their sponsors were prepared to give additional monies for you to push, for example, on a similar subject like that, I suppose which is still running at the moment, which would be the issues of sexuality, the issues of same sex marriage, and they are pushing for this, and you ask, and they raise it as human rights, but there are those of us in the country who believe that this is not right, it's immoral to do that, according to the Bible, according to our understanding, According to our social logical practices. It is a taboo, taboo, taboo, that a man marries another man, that a woman marries another woman. It's just not right. It's not about human rights, it's just that it is wrong.

MB: But they weren't arguing from a science point of view, they were arguing that they had people to feed?

RS: Yes, but the question was, were there alternatives to do so?

MB: And were there?

RS: Yes, there were. You could grow more. But it did change, it did change. It was an issue of emphasis within the country, and this is how the programs, for example the Ministry of agriculture, got FSIP, Farmer Support Input Program came about. What do you do? They needed to recapitalize these farmers because of the drought and because of the floods and because of this climatic change, at the time it was not fully understood, the el Nino, And changes in the weather, were obviously causing impact, it was not as well understood at the time, or we felt at the time, or the implications understood in the context of changing our pattern or doing things. So, so President Mwanawasa, at the time he became the president, and he basically took the decision that if we do not understand something, let's not do it. And he was basically of the view that if we assist farmers they can overcome this, and they did. From that time on, Zambia has never ever been in a deficit situation, the fact is we have had surplus that has supplied the region because there was input required for the small-scale farmers, and it is the small scale farmers that supply the whole country with food security. So it was possible. It could be done. It was a policy issue, it was not a scientific issue.

MB: OK. OK. So you said that there was tremendous pressure from the US, specifically the embassy, have you, did you notice any change in your relationship with the US after this?

RS: Yes. They were very adversarial, they were very aggressive, they were, they would invite you to, say four instance, lunch, And they would push it down your throat, saying this is an important thing after you did this. And the question was, why were you pushing it against us, I mean it's us who are hungry, So why are you pushing it down our throats? And that seemed crazy rather than helping the situation. OK? And obviously the US was very, very calm at the Embassy officials were very offended by a small country like Zambia rejecting buy a big scale supply offer.

MB: Really?

RS: That was the, basically the position that the US was pushing its agenda because they want to justify what they have done within their own country, and they would argue that, look, we have increased production by so much, and the question was then what? How about for us? How would we criticize that? Would we have to rely on you to do the same since supply of seed and the same supply of fertilizer? And the need was greater than just the seed, there are also issues of other support services, and the fertilizers would be needed, the plowing, for example, would be needed to enhance the yields. And just that change, where we had the farmer input support program, Which was supporting small scale farmers to get out of that situation, that alone change the situation and Zambia, right now amongst their neighbors, is outstanding. It has never, never had a shortage of maize which is typical for the region.

MB: So, right now you were in a drought, is Zambia in a good position still?

RS: Yes. It's as if, the consumption of our country, as a country, on our own is 1,250,000 metric tons per annum. That's the consumption the country has. However, places like the Kitanga province of Congo , It's almost entirely dependent on Zambia. So when you take that into account, and they have probably about two thirds of our population, about 9 million, maybe somewhere there. We have to take that into consideration, that one way or the other, this crop finds their way to them, whether legally or illegally, it doesn't matter, but the thing is when you grow, the crop, you must recognize that they will stand in need. And since the pattern of kind that climatic change, it's not on the Congo or Katanga, for example, which in fact should be in a better position than even Zambia. But there's Malawi, there's Zimbabwe, there's the northern part of Namibia, there's the northern part of Botswana, there is Zimbabwe. They all stand in need. In fact, even Tanzania. When I was the minister of agriculture we supplied all these countries, except we supplied Tanzania, Malawi, and Zimbabwe. When we came in to office, the president expected us, to go help the situation in Zimbabwe, and we went to the vice President and I, as a minister of agricultural, to go and conclude a deal. And the question was, it was not about supply, it was now about payment for it, because the president said, go ahead and give them the food, so that people don't die, but then I said, who is going to pay for the purchase of that food. The World Food Program was in fact buying

part of that for Malawi and Zimbabwe as well. OK, so certainly the situation has never been desperate, there are specific pockets where there has been insufficient food, either because of drought, or because of consistent climatic conditions in those areas, especially in areas like the valleys, the Zambezi valley, The, the coming down, Kariba. Same with the place called Luangwa valley, Bordering with the Congo. Again, that has always been a problem area, but that's because the way it's located, it's very, very hot there, so things grow only during the time of the rainy season, and then because of that there has been sick persistent problem. Now, before 2002, or leading up to thousand or two, we start to see that there were certain areas that had surplus before, we're now being affected in a negative way because of climatic change. So the issue is not whether you had genetically modified food or not, it was now an issue of how shall we do with the climatic change that is taking place and affecting those areas that are normally vulnerable, even worse than others? So normally you have that challenge in the valley areas, whether it's Luangwa Valley, or Zambezi Valley, or other valley areas which cannot sustain rainy season for long, so you have to grow crops quickly and then store them. So normally those areas have been affected even before this issue, this particular time, the 2002 draft.

MB: OK. Let's see, OK I think that's it, are there any other comments?

RS: Well, I think that there, that there are bigger issues that need to be addressed. I think the bigger issue is climatic change. How does the world respond to climatic change in, in, in the light of the vulnerability of many countries in Africa? If you go towards, you know, as for Zambia, I became even more acutely aware of this when I became Minister of Agriculture. Or a pattern is that if you take from the south east going to the north northwest now that it's bordering with Congo, starting with Zimbabwe, coming up through Lusaka and then onward, the climatic change has affected the country in that matter. Using that angle if you will, the line of angle. Now, the question is put what can you do about it? There's need for a policy change. Policy change should be, let's grow those crops that need much more rain more towards the northwest, in other words boarding with Congo, bordering with Angola, and so on and so forth. Now why is that so? The rainy season, the rainfall pattern is that in the southeast you have got as low as 600 mm of rainfall per annum. Whereas if you go towards the northwest, which is, This would be Luapula, this would be northwestern province and partly northern province and joining Tanzania, you find that the rain fall pattern is much, much higher, you can get as much as 1800 mm as compared to 600. So three times more in the Northwest has opposed to the south east where it starts from. Then you've got areas which are traditionally dry areas, for example the western province which is very sunny, bordering with Namibia. Now they are, even the cost of production is very very high. In the year 2013 the cost of producing a bag, a 50 kg bag of maize for Zambia range from a low of 30 kwacha Per bag to a high in western province of 96 kwacha. So, the same bag that you are producing 30 kwacha in eastern province or Northwestern province on average was coming out to 30, would be costing you 90 kwacha in western

province.

MB: Yeah.

RS: And if the price, which was fixed by government was about 70 kwacha per bag, it was profitable in eastern province and Northwestern and many other places, it still was not profitable enough for the western province because most of the fertilizer would simply go into the sand, you know, it would drain away, as it were, as soon as the rains came in. So, there is a policy and framework that is needed, in other words, don't grow maze in those places which are horrid, but are very good for growing things like rice. Very good for growing crops such as cashews. And those people they are dependent on fish farming, or rather catching Fish from the river, so fish farming would be perfect because they are right by the river, the Zambezi, and therefore fish ponds and so on and so forth for freshwater fish. And also as you come further out words from the western province, as you come into areas like Goma, For example the crop of maze is very good. So you may have to grow that maze in one part of the province to feed the rest of the province, in other words, increase your yields in that particular part so conservation , For example the crop of maze is very good. So you may have to grow that maze in one part of the province to feed the rest of the province, in other words, increase your yields in that particular part so conservation farming, for example becomes an important issue, so that even when the rainfall isn't sufficient, you would still get a good deal to justify the cost. And also, there is a management issue: should we be growing just for Zambians conception which is 1.2 million metric tons per year? The answer is no, but then we have to also sort out the issue of, to rehabilitate her storage issues for example. Now if you're going to keep main crops, maze in particular, because it's a stable commodity, if you're going to keep it, how many years supply should you keep? Should you supply your neighbors? Should you include the neighbors? Should you just restricted to your own consumption, and if you do, does that mean that then you must restrict the export? And if you restrict the export, what does that do to enhance production, to increase production? Does it not stifle? So, there are those policy issues which need to be resolved, those policy questions that need to be resolved. Having served as a minister, my own view is that, I think this calls for more than just the issue of private sector and government control. I think there is a role for government sure, but this is, there is sufficient food for the people, all the time. In fact, I would say that we should be looking at it from a regional point of view, OK? And saying, how much do we need? And the question is, if the neighbors, Zimbabwe for example are affected, do need this food, then we need to discuss with them, how much should we carry to support them? What is their deficit? So it's like, it's like the issues of a cu then we need to discuss with them, how much should we carry to support them? What is their deficit? So it's like, it's like the issues of epidemics which affects the whole area, whether you're talking about polio or you're talking about malaria, or you're talking about foot and mouth disease. When you have got these academics, you need to talk to the neighbors because they are as much affected as you are, and

you need to have a common policy. So SADC could be very useful for that, or COMESA, As the case might be. The challenge is, where would you get the money to carry these talks? Would it be done by private sector, or would it be done by government funding? And if it's going to be done by government funding, where will you get this to raise the capital itself? So who's going to rehabilitate these storage facilities? Is it going to be the government? Is it going to be the public sector? And if it's going to be the public-sector, do you have sufficient money for that? So those are the issues in my view, but need to be addressed. But if, politically, they archaeologist and today are tackled, they can be dealt with.

MB: But they are complicated.

RS: Yeah, they are complicated, just like the situation in 2002 was complicated. Wasn't it?

MB: Yes.

RS: But it was resolved.

MB: Yes.

RS: One of the challenges that we have has been the issue of the yield of the crops, for example in terms of maze. We were doing very poorly in terms of yield. You need to understand that as a country we also need to recognize what are our comparative advantages and what are our challenges? Comparative advantage is that we do have modest rain, quite a lot of rain as we go towards the Northwest, we do have. So if we decide that's the area we're going to grow the most crops, OK? It's a policy issue we take, and so we invest in infrastructure for that, in those particular areas. So in other words, and then you have to recognize that you've got to transport it to the deficit areas, just like I talked about, the western province where you can have that prop to service the western province, which has better yields. We need to recognize what is our comparative advantage because Zambia's comparative advantage it is in the end mount of arable land that's available.

MB: Yeah.

RS: OK? We have, as we stand right now, something like 2,400,000 hectares of arable land which is not cultivated. OK? Now that, by any comparison, is Zimbabwe pales. Malawi is nowhere near. Botswana, even with the good financial management that they have, they can only have something that comes anywhere near a fraction of that in the northern part of Botswana. Southern part is very much like our western province it's an arid Area because of the Kalahari. Namibia can't even match us, so the question that I think we need to do is to say, look, this problem is regional, it is global, but it is also regional, it has A regional dimension. So, what do we do? We need to discuss that together. Then we make

the investment and decide all those elements that you talked about. Yes they are difficult, so you keep at it. Do you say, just because they're difficult we don't tackle them? I think that human ingenuity can overcome that and for us, definitely the Lord is still kind to give us the water, and that is another comparative advantage. Zambia has 40% of freshwater resources in southern Africa. Freshwater! 40%! You know in the lakes, we've got something like six major lakes here. Those become reservoir is it for freshwater. So, for example within a distance of about 300 km an area called Cushing, it's a large farming block which normally commercial farmers use, mostly expatriate farmers use. There is drop there, there is no river, there is no major river. But just above, 300 km away, there is huge amounts of water which go to waste every year. So how about putting up a, a pipeline from there for irrigation purposes? So every line do you have along the way can be irrigated? 300 km it will become m is huge amounts of water which go to waste every year. So how about putting up a, a pipeline from there for irrigation purposes? So every land you have along the way can be irrigated? 300 km it will be, coming down into Kafue, For example. We draw, here in the socket, we are 50 km away from the river. So it's a possible thing, we can do it. It's a question of investment which is needed to do that. So it's a project that should be done immediately, once it's been done, that's it. If you go further north, huge, huge amounts of water. We can grow sugarcane. We can grow rice. We can do all that. We can do freshwater fish farming. We can do bananas. This country imports something like 80 to 100,000 metric tons of vegetable oil, oil which is imported from Malaysia. We can grow Palm oil, people do it now. So it can be done, but we must make a project. So if you, never to come back to the question which you are raising, is it possible? Of course it is possible. It is possible.

MB: It is.

RS: So it's a question of what we prioritize, for this way. And if the Americans were really serious about helping, then they should help us with those major projects, and say, OK, we want you to be self-sufficient, so you don't have to cry out for genetically modified food crops, OK? That's what they should have done, they should've said will help you with the pipeline, The water pipeline. Just like we bring water from the river to Lusaka, in South Africa they import water from Swaziland and Lesotho. So you can do that. So if the Americans wanted to, that's a good project for them to undertake. But the thing is, as you grow that pipeline, it doesn't have to be done all in one year, it's over 10 years for example, as you grow it, the crops also grow. As you extend that line, those crops along the way should be grown. OK? So that the food supply situation, not only for Zambia, but for the region, Congo, and Zimbabwe, and Malawi, and South Africa, can be able to get from there. So the situation that comes about because of lack of food is very serious. And it overspills, it does not recognize a border. If somebody's hungry in Congo, they will come to Zambia to get the food. They will do that. In any case, it also makes economic sense. We can then mill the maze and make mealie meal and send it. It's good value added for us as a country. And also the

fact that it's humanitarian, we would have performed a humanitarian feat, to provide the support to our neighbors who are affected, maybe in a worse matter than we are. So you ask the question, all this is possible. It's a question of prioritization. Can the Americans put the money on the table for this project? I don't know. To me, I think they should be doing that.

MB: OK. All right. Well thank you so much.

RS: You are welcome.

# APPENDIX C

## INTERVIEW TRANSCRIPTS: MALAWI

### C.1 James Bokosi

Professor James Bokosi , Member of staff at Bunda, Lecturer

Telephone Interview, Lilongwe, Malawi, 8-20-2016, Notes

Delegation to Mozambique- Standards, PS From agriculture, minister of agriculture

Purpose of delegation- to do with gm maize, issues about trans-border crossings, Mozambique was worried about the maize passing through the country, had to put up a case to let it pass through

Involved in the decision- asked to meet president and cabinet and discuss the safety of gm maize, we were actually taken to Blantyre to palace to meet the cabinet and president 2002- giving facts about the safety- at that time no evidence that it was dangerous to human health

Consulted with faculty at Bunda College

Involved with policy about biotechnology

Did you advocate milling it first?  Yes, when were discussing with the ministry we were discussing the modalities of bringing the gm maize, it would be prudent to actually mill it, because they were concerned that people would plant it

Did you believe there was harm in people planting it? There was no follow up to that that he knows of

## C.2 Scholastica Chidyaonga

Scholastica Chidyaonga, Director of Disaster Response and Recovery, Department of Disaster Management Affairs

Disaster Response and Recovery, Department of Disaster Management Affairs offices, 8/11/16

Also present: Madalitso Mwale

SC: In Malawi most of us do subsistence farming

MB: Uh huh

SC: We don't have a lot of commercial framers, and the subsistence farming is what is feeding the whole country

MB: Uh huh

SC: And the way we grow our food, we put in a lot of things

MB: Uh huh

SC: You know?

MB: Uh huh

SC: By the time, and I always get surprised, you know, at the time we are harvesting the maize, already we have these pigeon peas or cowpeas? What are they?

MM: Cow peas

SC: So these are food that Malawians grow. So you see, then already, soon after the harvest, they have already got…there was a time I was wondering, where are you going to plant them, and they said, we will plant them together. Soon after harvest something has to grow, it's because land, we have limited land, it is precious our land, and that is the whole purpose of subsistence farming. We put in even pumpkins before the maize is ready, we have even pumpkins. We don't have enough land to say, on this land I will only grow pumpkins, because we don't have the land available. So everything has to grow together.

MB: Uh huh. So you said, with the GMO maize, just to go over what you've said, that's the only thing that will grow? That's your belief, I mean, that's what you've heard.

SC: Yes, that's the only information the local farmer has got

MB: Ahh

SC: If there's not enough…I don't know because the government at the national

level makes those decisions. But there hasn't been any research on what GMO maize is like. But what I've heard is that once you put in GMO maize you lose local varieties, you know?

MB: Uh huh

SC: And also these days in Malawi you have people who are, uhhh, what are these seeds, we have our local maize seeds, and then we have the hybrid. Every year we hear of a different hybrid. This hybrid they say is early maturing, but you can't do it for a long time, because of, you know, …that we have. So you have the, you know, the hybrids, all these changes, and maybe they are genetically modifying and you don't even know it. There is some modifying, modification when they are doing hybrid maize, but there are still people who want our local maize. Our local type of maize, you can't store it for a long time, it's got, the seed is very hardy, and you know? Basically people like it, so even when you are eating the hybrid maize I can tell. When I'm eating the local variety, the taste is different. Yeah, so, but when you use the hybrid type, you know? You eat more of the husks, and maybe you have to put in a lot of, when you are eating your corn you put in margarine, but in Malawi we just boil it. It's the natural taste you want coming out from your food.

[Both laugh]
[Irrelevant interlude]

SC: So in Disaster Management Affairs, when we bring in aid, we have to be careful what people will want to eat

SC: Because sometimes we give them something, if they don't feel like they want it, no matter how hungry they are, or they are desperate, they won't eat it. I remember one time I hear that the government, it was a donation from the Arab countries, dates and it was all dates, and it was fine, but Malawians don't eat dates.

SC: It was rejected, yeah

MB: So do you think, do you see a problem, if you do end up having to have GMO maize, do you think Malawians will eat it?

SC: Ummm

MB: Is there that big a taste difference?

SC: I don't know. I may have tasted GMO things outside the country. I've tasted a grape that is almost the size of a plum.

[Both laugh]

MB: Too big, too big

SC: I couldn't finish an apple, which was so big, I said what sort of apple is this? There is a normal size of apple that I know. I have tasted that, but on maize, if you process it into flour, you know flour is different than. Also, it depends, most of the maize coming outside was yellow. Do you mostly eat yellow? Because here they eat white maize. Yellow maize is ok, but if you are used to white maize, you won't eat. So there are all these peculiarities that people have. Sometimes you just have to respect what they need. Because recently we had some sorghum donated. We had to identify where they eat sorghum, where they naturally eat sorghum. Anywhere else, if we give them sorghum they will just reject it.so people are really sensitive to what they eat. It doesn't matter if they have nothing, there are certain things even they will shun them.

MB: Huh, ok. That is interesting.

[Both laugh]

SC: That's what I have observed

MB: No, hey, you are from Malawi, you should know

SC: Yes

MB: Um, ok, let's see, what else can I ask? Umm, are you at all concerned, and you may not be able to answer this, but are you at all concerned about your relationship with the U.S. should you choose to reject GMO maize. Are you worried that they will be upset or anything like that?

SC: Uhhh, not really. What sort of maize have they been giving us all these years? They don't send maize.

MM: they've been sending cooking oil in the parcels

SC: In the parcels. No, not maize.

MB: As a matter of course about 30% of food aid that the U.S. sends is GMO. Different kinds, not just maize.

MM: so the parcels we have received, even the beans and like, could be GMO

MB: Could be, yeah. I don't know that for sure, don't quote me on that.

SC: I think the main thing was, because I've seen the parcels, the parcels are medicine and clothing. It's just that having something which we cannot normally grow, that's why I think that decision was made, to mill. People should be well-informed. Like I've said, that's the information that I have, I haven't proved it, or looked to say, what is the difference? Right now, I'm telling you we have these hybrid varieties, with this climate change, you know? The problems we are having, we are experiencing it. At least 90 days, or less than 90 days a year of rain. Grain, which has matured, but quick maturing, you don't store it. You have

to use it immediately.  But then, what the challenge is also climate change. So people just need to be well-informed, before that decision, we need people who are well-informed. But it should not be imposed on us, and people should at least have the feeling that, we took part, we understood. What are the different advantages , what are the disadvantages? What is that we need to do?  Are we being unrealistic? So people need to be well-informed.

MB: I agree. Ok, so your name is Scholastica?

SC: Yes, I will give you my card.

[END]

## C.3 Katherine Chiweza

Katherine Chiweza, Communications Officer, Biosafety Systems, National Commission for Science and Technology

National Commission for Science and Technology offices, 8-19-16

National Commission for Science and Technology Offices, Lilongwe, Malawi

MB: Ok, so first tell me your name

KC: I'm Katherine Chiweza.

MB: And what is your position here?

KC: I work with the program for biosafety systems, I'm the communications officer.

MB: Ok, and this is the National Commission of Science and Technology

KC: Yes, the program for biosafety systems is housed within the National Commission for Science and Technology. They manage the project

MB: Ok. Were you here in 2002?

KC: Here, as in…?

MB: Working here, I mean

KC: No, no

MB: Do you know anything about that decision?

KC: At that time all I knew was there was yellow maize that came to Malawi. Now that I'm working in this field that I now understand that it was GM maize, you know. But I wouldn't know anything about the decision, but there is a professor in, I don't know if you've met him. Have you met Professor Bokos, he was the one who did all the negotiations with the president, they went to Mozambique, they went to all these places. If you haven't met him and if he's not on your list, he's someone you should meet

MB: He's on my list. So thank you. Ok, then let's talk about right now because the same thing is happening right now. What…is your commission involved in the decision to accept GM maize?

KC: I don't think so.

MB: Ok, what does your department do?

KC: The commission?

MB: Mmmhmmm

KC: Ummmm…it is there, it was established to advise government and any interested stakeholders on any issues of science, technology, and research. So this is an area that falls in the interest of the commission for science and technology. And it is also to promote the research that is going on in the GM technology. So definitely if they had been approached, they would have given it a go ahead because they understand the science and promotes the science behind GM, but to be honest I don't think they were approached during the decision-making process.

MB: Ok

KC: I don't think so.

MB: Ok, ummm. Yeah, I haven't spoken with Professor Bokos, I did speak with Kingdom Kwapata who is also involved with the BT cotton trials. Let's see….alright, well I think that's it. That was short, right?

## C.4 Kingdom Kwapata

Kingdom Kwapata, Senior Lecturer, Bunda College

Bunda College, Lilongwe, Malawi, 8-12-16

KK: The issue of disclosing what we're going to say for public consumptions.

MB: Yes

KK: Yeah, I have no problem with that. You can, you can go ahead and publicize wherever you need to

MB: Ok, thank you

KK: And quote me, yeah I have no problems

MB: Ok. So you are Dr. Kingdom Kwapata, and what is your position here?

KK: Here I am a lecturer and researcher in biotechnology.

MB: Ok. In 2002 what was your position, were you here?

KK: No, I was in civil society in 2002. Yeah, so I was heading an organization called the Malawi Human Rights Network

MB: Malawi Human Rights….?

KK: Human Rights Network, we were a human rights organization. So during that crisis period, that's when I began to become involved with issues of GMOs because as you may have probably read, there was resistance to accept that maize, particularly because neighboring countries were so resisting, Zambia and Mozambique, and I think even Zimbabwe. So I think the challenge was they didn't want this maize to pass through their borders.

MB: Uh huh

KK: And then there was also growing pressure to government to, to, to tell them, don't accept this maize from outside the country.

MB: Who was giving pressure?

KK: Civil society organizations. One of the pressure groups, and generally, the majority of people didn't really understand. So my role in that context was that I was at the forefront of advocacy to, you know, urge the government to accept the maize on humanitarian grounds. Because my position was to say that look here, what was going on at that time was that people were speculating that this maize was not fit for human consumption. They were insinuating that the U.S. was giving it to animals, and if humans eat this, there will be a lot of complications,

health complications. And also, issues related to impotency, fertility of males, and issues related to if people plant this maize it might contaminate this soil. So, environmental concerns, Issues of trade also, you know, came in. So there were a lot of complex issues that people brought up as why government should not receive that maize. And during that time there was no expertise in this country, or limited expertise, may be here and there. People didn't really understand biotechnology concepts themselves. So as I was advocating government should accept this on the basis that, you know assuming that this maize is poisonous and people die, right? And then you have two options- you either accept the maize and people die if it's poisonous, or you reject the maize, people still die because of hunger. So I was saying, either way, I just bring it in. If we all perish, then that's fine! As opposed to, you know, withholding it, because you're fearing the consequence. Yeah, so, I think our advocacy worked very well during that time.

MB: Clearly.

KK: Yeah, and the maize was ushered into the country. And it's because of that that I caught the attention of the then American ambassador, who invited me to her office and, because I already had a background in agriculture by then. I had a master's degree in agriculture. She said, why don't you go train in a PhD in biotechnology so you can come back and be an expert, an authority in this and probably if this crisis happens again, you will be in a better position to advise your government on scientific points. So I accepted a scholarship , that's how I went to the U.S. and started a PhD in biotechnology.

MB: Where?

KK: Michigan State. So since I came back I've been working on this, doing trials on BT Cotton. I was the first one to introduce BT Cowpea into the food crops, as part of my research investigation. I have the potential to use this for, as improved variety for farmers.

MB: Mmmhmmm. I read a little about your BT cotton proposal. Has there been a lot of resistance to that?

KK: Very much, a lot of resistance to that. Sometimes you, as a scientist, you derail from your whole objective in science and then you start focusing on managing the public aspects, politics, human relations and all of that, yeah? In order to bring people up to speed, but also to convince people that, you know, what we're doing is absolutely safe. Yeah, so there's a lot of resistance, and a lot of uhh, ummm, yeah. Particularly the cowpea, the food crop, is the worst, because we really don't have support from a wide range of stakeholders on that aspect.

MB: Ok. Let's see, you've answered most of these. How were you informed of

the decision in 2002?

KK: That the maize is coming?

MB: Yes

KK: I think it was public announcement on the radios, and the newspapers. That the government wanted to tell people they had accepted at that time, I think it was yellow maize. I think traditionally people don't eat yellow maize here. There are a lot of stereotypes around it; it's normally the white color. So, people had to explain, the government had to do an explanation. By the way, this maize was milled, it was not given to people as grain normally. So yeah, there was an explanation to the public.

MB: Ok. Let's see. So who did you speak to, you said you were trying to apply pressure, who did you speak to, were you speaking to government officials?

KK: Yes, by then we had a very charismatic Minister of Agriculture, his name was Maliki Banda. So, these were the people who we were constantly engaged with. And we also spoke to the PS, the Director of Agriculture who was then Dr. Mahonga. Yes, so, you know, it was…

MB: And were they both on the, what is it called, the National Disaster Preparedness Relief Committee?

KK: They must have been because they, uhhh, as Minister of Agriculture, they were representative, but I'm not sure whether they actually had the seat there, or sent someone. But in terms of top officials making the decision at this time, it was these guys. Yeah. And uh, I think there was a team that flew to Mozambique to discuss with the government of Mozambique to let the maize come in. I wasn't part of it, but the Minister was there, and another professor, a colleague of mine, Professor Bokosi, was there as an advisor to the Minister on these issues. So the food discussion with the Mozambiquan government was to use that as a route for the maize.

MB: And you've kind of answered this, but have things changed in any significant way since the decision was made?

KK: Mmmmmm

MB: Is the, is the country a little, you spoke about how there's still resistance, but are they less resistant because it's already happened and nothing happened?

KK: No, they aren't less resistant

MB: They still believe…

KK: They still believe…because…I was recently in China and I happened to meet the Minister of Agriculture of China, and we were discussing a program to bring

in a new variety of maize that is drought tolerant. So the minister's first reaction was, is it yellow maize? Is it GMO? Because if it's yellow maize, or GMO, I don't want to hear anything about it. So a couple of years ago, the Bill and Melinda Gates Foundation offered to do trials on water-efficient maize in Africa, and the government found out and refused. So, I think, what I am seeing is that, in terms of genetically modified crops, the government is somehow relaxed to allow research in other crops, like cowpea, I think there is now banana. But when it comes to maize, they won't even discuss.

MB: Because it's such a staple

KK: Yes, no one wants to hear a proposal about trials in maize.

MB: And yet, they're now in a position where they are having to look at the decision again as to whether to accept GMO maize.

KK: Yes, because they have no choice. They are starting to scavenge for maize in different countries with big farms, but the U.S. government is saying, we have so much maize, but it's GMO, so it's up to you to make a decision.

MB: And if they were to accept it they would again say, it has to be milled first?

KK: I would think so, I would think that's what they would say. It has to be milled first, which is just a headache and an unnecessary expense. Yeah.

MB: Yeah. Because you have studied this, you don't find any problem with this?

KK: Not at all.

MB: Yes, in the U.S. the National Academy of Sciences just came out with a report saying they cannot find any harm in GMO food, and yet, there is a big campaign in the U.S. for GMO free food.

KK: That's right

MB: And I find that a little silly. MB: Um, ok, it wasn't' the science, there wasn't a lot of science in 2002.

KK: Not at all

MB: So it wasn't the science that convinced them, what do you think convinced them? Was it purely humanitarian?

KK: Political pressure as well from the grassroots. People were really in need of the maize. Yeah, so that pressure was significant. In addition, to maybe institutions like mine that were involved, they came to a decision that, let's accept this.

MB: Ok. Ummm, you've answered that. Any other comments?

[Both laugh]

KK: No , I mean, what I can say is that I, you know, yeah, issues to do with GMOs are very thorny still, and not only in Malawi but throughout the region. And I think that the majority of the background is due to fear of the unknown, but also purely lack of knowledge of the science behind it.

[Phone interruption]

KK: so as I was saying, that it is a thorny issue because of lack of knowledge. Particularly those who make our policies, there is a lot of fear, doubts as to whether the benefits that your scientists claim are really indeed substantiated, worth taking the risk of, you know, ummm, of introducing genetically modified food in the country. And I think that the anti-GMO lobbyists are very strong, stronger than us.

[Both laugh]

KK: So because of this, you know, their voices are more pronounced and prominent. Yeah, so it's very difficult for meaningful engagement to really convince the policymakers, but in my opinion, I think it's really a loss because, you know, some of the varieties are very promising. Particularly maybe the drought maize that has been developed. Considering the fact that we're experiencing episodes of drought, and that will be able to stop the problem, and compliment other efforts that are also being done. So little by little maybe we will.

MB: Are you doing any lobbying this time?

KK: Uhh, no.

MB: You're busy

KK: Yes.

[Both laugh]

KK: Yes. Yeah, so there's another institution, I don't know if you've talked to them, it's called PBS.

MB: PBS, and what does that stand for?

KK: Public Biosafety Systems, something like that. It's an American based organization, but domesticated in Malawi. It's director is Mr. Mkoko. I'll give you the number.

MB: Thank you

KK: So how we've structured our working relationship, we are mostly concerned with the science aspects and they are concerned with the issues related to advocacy. So there's some coordinating between us.

MB: I see.

KK: Yeah.

MB: And was PBS around in 2002?

KK: I'm not sure. I think I've just come to know of it recently. But now the gentleman

[Contact info discussion]

MB: Ok, I will contact him, thank you. And do you know of any official sources that I could get access to? I don't know that you would have any access, but meeting minutes, scientific papers read, documents like that. Do you have contacts that I could…

KK: Let me see if I can give you the phone number of Professor Bokosi. He is here and was also on the advisory team.

MB: he was part of the delegation

KK: Yeah, so he may also have more information.

[Contact info discussion]

## C.5 Wilkson Makumba

Dr. Wilkson Makumba, Director of Chitedze National Research Station, Lilongwe, Malawi, 8-16-16

MB: Ok, please tell me your name

WM: I am Wilkson Makumba, Director of Agricultural Research

MB: Ok. And what was your position at the time of the 2002 decision?

WM: By then I was the National Research Coordinator for the Ministry of Agriculture.

MB: Were you at all involved in the committee, the National Disaster Preparedness?

WM: No, I was not.

MB: You were not, ok. What were your subsequent positions or if you would rather you can provide a CV for me.

WM: Yeah actually, from that, actually I was promoted to become the station manager for Chitedze Agricultural Research Station which is one of the biggest research stations for the Department of Agricultural Research. That was the position of Senior Deputy Director for Agricultural Services. Then later in 2015 that's when I was promoted to the Director of Agricultural Services.

MB: Congratulations

WM: Thank you.

MB: What was your involvement in the decision?

WM: I would say I was not directly involved in the decision, but rather being a member of staff for Agriculture, I definitely was looking at the issues that were surrounding to the problems that we had by then. And the only option that we had was to allow for actually that corn to come into the country, so that at least we save the people.

MB: Mmhmmm

WM: Indeed Malawi, according to our policy, we did not allow for the introduction of the GMOs. However, we were not 100% strict with regard to the importation of GMOs, but rather--

[Small interruption for the secretary to bring in water]

WM: The recommendation is that, uhhh, in times of great scarcity in the country, of which this year is one of, we could not allow the people to die when the grain is there, simply because it is GMO. But we did not want to introduce the GMO so

that at least it affects the germplasm that is in the country. So we do advise that any grain that is imported into the country that is GMO, that one should be milled straightaway. You know? At the point of entry. Or it will be monitored to where it can be milled or hulled, so that no farmer can use that grain as seed.

MB: Mmhmmm

WM: You may wish to know that of course not all the farmers are capable of buying actually the hybrids. That is the commercial grain that has been produced by commercial seed companies. So some of the farmers, they recycle the seed that they have. In this case you find that the local maize varieties, a number of farmers actually, a good percentage of farmers actually, they are using that, because they cannot afford the hybrid varieties. But with the farm input subsidy that we had, that we have actually, because of the high reduction of, you know, of the grain, I mean the seed, of the price, the farmers actually were able to afford to buy the hybrid. And that has seen Malawi actually, led to the farmers adopting the hybrid varieties, but not GMO.

MB: Not GMO. Ok, and what were the arguments against accepting?

WM: Uhh, definitely because scientifically it is not actually conclusively proven, the side effects. You know?

MB: Mmhmmm.

WM: There's a lot that is being talked about it. And some research of course, it has even shown that like, where they have used the guinea, you know? The guinea pigs, they have shown that of course they have developed some tumors after feeding with it. Yeah, so we're looking at that, saying, we might be having those. And the side effects on people. But we are still waiting for it, you know, the actual conclusive work or scientific proof that it did it. You could actually say that it's being pushed here. Look at Malawi. I would tell you that the average Malawian actually takes breakfast, you take grain, porridge. Come lunch, we take our common nsima. Supper, we take nsima again. So every day, three times a day, we are taking nsima. So whatever problem that might be introduced in the grain, you know, the consumption is very high. It is the effect, you know?

MB: Yes, because they eat so much.

WM: We eat so much. For us, every time we go to the table, there is maize. And sometimes I think, if you were to stay a little bit longer, you would even find that there is a lot of maize that is being roasted along the road. And people are also eating that. So most every hour you are eating maize.

MB: It's truly a staple.

WM: Yes, so the consumption is so much. You look at Europe or America where maize is grown, most of it actually is for animal feed. Some of it actually goes

into cornflakes. People eat cornflakes in the morning, you see? And it's a choice, because it's not only cornflakes, there's some that is rice, and what. So it's different.

MB: It's true.

WM: So the consumption rate of maize is very low. So whether it is GMO it can affect people, the genetics of people actually, usually that cannot be so much feared because of the rate of consumption. Let it be on wheat, where wheat consumption is very high, just like maize in Africa.

MB: True.

WM: It will be different. Of which you don't see the same, because wheat, there is no GMO that we hear of. I don't know, maybe I'm aware of.

MB: Not that I'm aware of.

WM: I'm not aware of that. It is on maize. And those stories behind it, this is why we are saying, no no, this is risky. And in the meantime there is no issue with the varieties we have developed which are GMO free.

MB: Yeah. Ok. Was there, was there any talk of, I don't know how to phrase this exactly, but, that it was a plot by, say, Monsanto to get Malawians to eat it, and get them kind of addicted to it so they would continue to eat it? Does that make sense?

WM: Uhh, but what I know is, well that might be there. But the problem is that whether it is GMO or non-GMO, the taste doesn't differ.

MB: Ok, so it wouldn't make a difference to people.

WM: Doesn't make any difference. And there's no way to make people addicted to GMO maize, as far as I know.

MB: Well, but I guess I meant that if it was grown, then if it grew better, that would be

WM: Yeah, that would be the thing. Ok? Because we would be looking at the yield. And if anything, if the genetically modified, if they are adaptable to certain conditions or situations, so farmers might be looking for that. But basically when it comes, the traits that the farmer likes, then for sure they cannot go for the GMOs, because most of them, they are dented (?) varieties, which most of the Malawian farmers they don't like.

MB: Ok.

WM: They would get the dented varieties for sell. Not for their own domestic consumption.

MB: Oh, ok.

WM: They like most of the frittered (?), and the frittered type we have in the country, they are not GMOs. Unless they were to come in and introduce the GMO frittered ones. But so far the ones I have seen, they are the dented ones. So the preferences of the farmer actually it is going more towards the local maize rather than the hybrid varieties. This why there has been resistance in the adoption of the hybrid varieties.

MB: Ok. Was, let's see, as National Research Coordinator were you consulted?

WM: Yeah, by then of course I was not consulted.

MB: Ok. And were you aware of any pressure coming from either the U.S. or the EU to make the decision one way or the other?

WM: Well I would not say it was not necessarily pressure, but advice. By then it was coming through, the problem that we had. There was hunger and they were saying, we have got aid, and this is the form of aid that we have. So it's up to you to accept it or not. Just like Zambia, because they had the alternative by then, you know? So at least they had the courage to say, no no no, to GMO, it shouldn't come to our country, because at least they had the alternative. Malawi did not have the alternative, that's why we had to accept it, but with the condition attached to it.

MB: That it be milled.

WM: Yes.

MB: And what alternative are you saying Zambia had?

WM: They at least had some grain, and they had where they could also buy because they had some resources, so they could buy some grain that was not GMO. But for us we don't have the resources, you know? So we depended on the donations. Yeah. So we had limited choice.

MB: Was there concern that your relationship with the U.S. would be damaged if you didn't accept?

WM: No. Actually I wouldn't say that would be a reason to damage the relationship actually between the two countries. Later on there's this issue of, like, the gay issues, you know?

MB: Mmmm

WM: Which Malawi is still resisting. We are not comfortable with that. Is our relationship damaged because of that? No, we are still moving on those other issues.

MB: And was there concern that your trade relationships with the EU would be

damaged?

WM: In this case it was no, it was a donation to us, we were not buying. So I don't think there would be an issue of trade.

MB: But if you had GMOs in the country and the EU is so opposed, was there concern that they would stop trade?

WM: Yeah, because the other thing was that actually within the EU there are so many countries that are saying no to the GMOS.

MB: Yes, they are very opposed.

WM: So I don't think they would be hard on us. Because even within themselves, they are divided.

MB: Yeah. Ok. Let me make sure this is all. Was there pressure from anybody to reject the aid, and if so, who was pressuring to reject?

WM: In this case since I was not on the committee, so I'm not aware if there was any

MB: Ok, but you didn't know of any farmers' associations or NGOs?

WM: You mean within the country?

MB: Mmmhmmm

WM: Uhhh, not necessarily, of course sometimes we have unnecessary comments that come from civil society organizations, but they are not the things that can make the government bow down. But rather, you know, because the government actually has technical advisors, ok? And sometimes the people that are anti are not in this country. They would go and consult the wrong person on issues of agriculture. Eh? I will give you an example, we have got actually two colleges in the country, universities. That's the University of Malawi and University of Luana, this is the Lilongwe university of agriculture and natural resources. There comes someone who comes to consult a professor from the University of Malawi who does not do agriculture. Is there any research they could get out of that?

MB: No

WM: And that is what normally happens. And you get even some of the journalists. They get people who are just vocal and talkative from the University of Malawi, just a college that does not offer agriculture, to talk about agriculture, leaving the professionals in agriculture. Yeah so, sometimes actually this is what journalists do. Or the articles they write, it is just misleading, the people that are being consulted, they are not professionals in that subject matter.

MB: They are not qualified to offer an opinion

WM: They are not qualified to argue, but some they just argue politically. But there's no research that they are actually bringing in. So those are the things that is that of course the government will look at, the subjectivity of the issue.

MB: So they are less likely to listen to those opinions because they're not qualified.

WM: They are not. You know, there are some people who may not be qualified, but they might be talking sense. But it is right to consult the real professionals in that particular field. Because they will tell you technically how it should be handled. And even the implications that might actually accrue.

MB: Ok. Do you have any other comments?

WM: No, I don't have any comments.

[Both laugh]

MB: Ok. And do you know of any official sources that I could get access to? Scientific papers, legislation, government documents, anything like that?

WM: On this issue I don't know whether you have consulted the Department of Environmental Affairs.

MB: I've tried. I have not been successful in reaching anyone there, but I have tried.

WM: Really?

MB: Do you know of anyone I could speak to there?

WM: Yes, of course I know of the PS (principal secretary), but I don't remember whether I still have the contact number. Let me just check.

## C.6 Boniface Mkoko

Boniface Mkoko, National Commission of Science and Technology, Director of Public Biosafety Systems- Lobbyists

Telephone Interview, Lilongwe, Malawi, 8/20/2016

What was your job at the time? In that time I was, I think I had retired, I was no longer working in government, doing my own thing

Our org wants to make sure that there is a good delivery system in place

Ideal delivery system- following the acts of the nation and the international observed standards

## C.7 Madalitso Mwale

Madalitso Mwale , Assistant Director, Disaster Response and Recovery, Department of Disaster Management Affairs

Disaster Response and Recovery, Department of Disaster Management Affairs offices, Lilongwe, Malawi, 8/11/16

MB: Ok, so please tell me your name.

MM: My name is Madalitso Mwale

MB: And what is your position?

MM: I am a Relief and Rehabilitation Officer in the Department of Disaster Management Affairs

MB: OK. Or DODMA?

MM: DODMA

MB: Ok, were you working at DODMA in 2002?

MM: In 2002 I was still a student.

MB: I thought you looked a little young.

[Both laugh]

MM: Yes, so then I was in 3rd year of college?

MB: Ok, and how long have you been at DODMA?

MM: At DODMA, this is my 4th year now, since 2013

MB: Ok. So, you'll be speaking perhaps to things that you have heard about, rather than experienced, but how was the decision made to accept genetically modified food aid?

MM: From 2002, from my knowledge, based on the meeting we had at the Office of the President and Cabinet.

MB: Mmm hmm

MM: Uh, when the committee, the National Disaster Relief and Preparedness Committee met to make a decision whether to accept GMO maize or not, there was actually a brief discussion whether to accept it or not, with reasons. So based on what was discussed in that meeting, those who met in that meeting were there in 2002 when the decision was being made to accept GMO maize.

MB: And that committee is called the national…

MM: The National Disaster Relief and Preparedness Committee

MB: OK

MM: Yeah, I can give you the proper name at the end

MB: Wonderful

MM: That's a high level committee where the principal secretaries and directors meet and make decision on what the nation should do

MB: And who was on that committee, you said principals and directors, but directors of what?

MM: These are, It's mainly principal secretaries

MB: Ok, in the cabinet?

MM: Yes

MB: Because it's in the OPC

MM: Yeah. And it's mainly chaired by the Chief Secretary of the government

MB: Ok

MM: So, the…at that meeting it was…not agreed whether to accept or not, but some quarters were saying, if we don't get non-GMO maize, then we have no option

MB: Mmmmm

MM: But to accept the GMO maize, with reference to the 2002 where we accepted the gmo maize.

MB: Mmhmmm

MM: Yeah, so, it was indicated that the GMO maize would only be accepted if its milled at the point of entry

MB: Ok

MM: Yeah, with the reasons that if we accept the GMO maize here, it may affect other varieties in the country

MB: Mmmmhmmm

MM: Because we may not know whether all the maize will be, may be milled, and used for food, because some people in the rural areas maybe want to try to plant it

MM: So, that would be dangerous and would affect the varieties of maize, and that would bring problems. So on the basis most people said, if we are to accept GMO maize then it has to be milled at the point of entry so it comes here as flour.

I'm not sure what happened in 2002, but the indication is that maize was not milled as such, and I don't know how it was controlled. But this time around as a control measure, it was indicated that if we are to accept the GMO maize, then it has to be milled.

MB: Mmhmmm

MM: And that would only happen if we don't find non- GMO enough to feed the vulnerable people of the nation

MB: Ok, and by this time around, you mean what's happening right now?

MM: Yes, yes. Right now the government is still procuring maize, and no decision has been made yet.

MB: K

MM: …On whether to accept the genetically modified maize. We hope, we're just hoping that we'll get enough maize, non-GMO maize.

MB: Mmmhmm. So, but I know that there is a current genetically modified cotton experiment happening.

MM: Yes

MB: So Malawi as a country is not necessarily opposed to GMO.

MM: Yes

MB: Is that accurate?

MM: Actually, Malawi is not opposed to GMOs crops, but with this culture now to say, because I heard the principle secretary for the Ministry of Gender

MM: Yes. She was that in meeting. She had her own reason to say, let's not accept this maize now, because it may affect our health. She cited a few examples on the effects of GMO maize on health

MB: Um, what were, what did she cite?

MM: Well, as far as I remember, she mentioned the issues to do with the reproduction, that it may affect reproduction, or the reproductive system. That's from her knowledge of GMO, though some people really indicated that it doesn't have any effect on the reproductive system

MB: Mmhmmm

MM: Then she also mentioned issues of nutrition, nutritionally

MB: That it's not quite as healthy?

MM: Yes, nutritionally she said that it's not that healthy to be eaten. So she cited

those examples to say we don't accept this maize.

MB: Hmmm, ok.

MM: Yeah

MB: Ok

MM: Sure.

MB: Was parliament involved at all, other than the cabinet ministers? They didn't meet to vote or anything like that?

MM: No, no. at this point, no, parliament hasn't been involved

MB: K

MM: I think if a decision is to be made, then it's that committee that will make the decision. Because that committee will also have some ministers who attend. So once that committee approves to accept the GMO maize then it's actually done.

MB: Then it's done. Ok. Ok. What do you feel were the primary reasons for accepting GMO maize

MM: Come again?

MB: What were the main reasons that Malawi accepted GMO maize even though they had concerns?

MM: I think that the main reason was…there wasn't enough. Ummm, non-GMO crop available, even originally, to meet the demand that was there in 2002, because I remember, was it over 5 million people who were food insecure?

MB: Wow

MM: Yes, so

MB: That's a large part of your population

MM: Yes, and demand was just so high. And I remember that here it was not only Malawi was the country which was affected, so in the region other countries were also affected, so there was a scramble for the little maize that was there.

MB: I see

MM: So, so looking at the population which has been affected this year due to, we are calling it El Nino, it's mainly dry spells in the southern region, see over 6.5 million people

MB: Even more than last time

MM: Yes, so that's why there's been mention of GMO as a second option. But if

we don't get enough non-GMO, then possibly we will go for the GMO maize

MB: Ok

MM: Yeah. Right now the National Food Reserve Agency is procuring maize locally

MB: Mmmm

MM: Yeah, there are good indications that the maize can be sourced locally, even from neighboring countries like Zambia, though Zambia, I understand has banned the export of maize

MB: Yeah, Zambia is in trouble as well

MM: So, so like if we exhaust all the local reserves from farmers, um, looking at the need this year, we are likely not to meet the demand with local non-GMO maize. So I, I, I, I'm looking at us as a country, at some point we'll make the decision to accept the GMO maize

MB: Mmm, you think it's likely

MM: Yes. But then, with that caution that that maize should be milled at the point of entry, so that no one uses the seed which may affect other varieties of maize in the country

MB: Ok. Ok. Ummm, let's see. Who was consulted about the decision, did you consult scientists? Other governments?

MM: About the decision to accept GMO or not to accept?

MB: To accept [both laugh] well, both, it's the same decision, right?

MM: Yes, it's the same. It's the same. Normally a decision could be made, but any consultations have to to take place with the scientists, especially our colleagues at the Bunda, there's the Bunda College of Agriculture

MB: I'm actually meeting with Kingdom Kapwata tomorrow

MM: Yes, that's where they're testing the GMO cotton. So actually, that decision will be made with the support from the experts.

MB: Ok, ok. At Bunda College, is the best place. Ok great.

MM: Yes, Bunda is the best. So I'm hoping that those people be consulted before that decision is actually approved

MB: And they'll be consulted by the committee, the committee will consult them?

MM: Yes. Yes. Yeah. Sure

MB: Ok. Was there pressure coming from organizations outside the government,

such as NGOs, or I know tribal chiefs played a role in Zambia, did tht play a role here? Uh, farmers' associations. Was there pressure saying don't accept or do accept?

MM: No, the pressure was emanating from the figure

MB: From the…

MM: The figure, or the number of people

MB: Oohhh

MM: Without food. The food insecure households. Looking at the figure, saying it has never happened in the history of Malawi to have such a huge number of people food insecure households. Yeah, so so, just looking at the number they're looking t how the agriculture season has performed. It has performed poorly, and we haven't raised enough. We have a deficit in terms of production, maize production. So likely it's coming from that understanding that we will not be able to meet the needs and the demand. And then looking at the market regionally, we also have our colleagues of Africa, they have also have production problems. Zambia, the same thing. And then, at the time, people were mentioning Brazil, Ukraine, Mexico, that's when the issue of GMO came to say, is this maize which would be imported from Mexico be GMO or non-GMO?

MB: Mmmhmmm

MM: So from that point some people say, whether it's GMO or not, we will accept it. If it's GMO then we have to control it from the point of entry. So it's coming from that background.

MB: Uh huh. There are just too many people hungry to worry about other pressures, is what you're saying?

MM: Yes.

MB: Yes. Ok. Ummm, did you feel pressure, was there pressure from the U.S. to accept GMO maize?

MM: No

MB: No? Ok

MM: No, the pressure is not from the U.S.

MB: No?

MM: No.

MB: Alright. Was there concern though that the U.S. wouldn't like it if you didn't accept it?

MM: No, not to my knowledge. To my knowledge, I haven't heard the U.S. or ministry here say anything about the U.S. maybe having an influence on the GMO accepting or not accepting. I haven't heard on that.

MB: Ok. And what about the EU? Because the EU, the European Union is very opposed to GMOs. Does Malawi do a lot of trade with the EU?

MM: Yes it does, but then maybe the issue is, that's why there's that caution to say you only accept the GMO maize in the form of flour. So that it becomes here as flour, but not as maize seed.

MB: That's one of the reasons to mill

MM: Yes. So it's like maybe, I don't know how the EU decided, but the people are saying if it comes as flour then we will have no problems because we will be distributing flour, not the maize. So maybe it's from that understanding that it's safe to bring the GMO maize, which will be in the form of flour, not the seed here. Because normally we distribute the seed so that it's milled. So it's the grain which is not wanted.

MB: Ok

MM: Yeah

MB: Ok. Um, oh. Umm. Ok, any other comments?

MM: Yeah, maybe my comment will be, from your understanding, would you support the idea, the decision to import GMO material in terms of maize or flour? Looking at it, from your knowledge, looking at the GMO maize and then the flour, nutritionally or healthwise. Because we are just focusing on the health of the people and then that food should not have negative effects on members.

MB: Well, personally, and this is not as a researcher, I don't think there's a problem with GMOs. I don't know if you know that the National Academy of Sciences in the U.S. just came out with a report, and what that report said is that we cannot find any harm in GMOs. So, personally, that's my opinion, but I am not a specialist or scientist in that area

MM: Ok

MB: And do you know of any official sources I could get access to, such as meeting minutes, scientific perps, official sources, that type of thing

MM: Maybe I could get that one. I could also check with colleagues and then I could send you any links where you can get those papers.

MB: That would be wonderful.

MM: So you leave me with your business card then I will be able to provide that information.

MB: Ok, and do you know anybody o the National Committee that I could speak with?

MM: On that committee, let me…probably if you talk to the principle secretary in the Ministry of Agriculture, that's Mrs. Erica Manganga

## C.8 Duncan Ndhlovu

Duncan Ndhlovu, Aid Worker

Lilongwe, Malawi, 8-17-16

MB: Ok, so your name is Duncan Ndhlovu

DN: Yes

MB: Did I pronounce that correctly?

DN: Yeah it is.

MB: Oh good. And you are an aid worker?

DN: Yes

MB: Ok, so we are talking about the decision in 2002 for Malawi to accept genetically modified food, specifically maize. Did you know, or did your organization know about the decision before it was made?

DN: Before it was made?

MB: Mmm, the decision was pending

DN: Yes, because we had a crisis situation in the country, food crisis situation in the country, and ummm, it was also a regional problem, so Zambia was affected, Mozambique was affected, Zimbabwe was affected, so I think South Africa was the only country that was better off in the region, and they couldn't supply for all the needs in the region, so there was need for most countries in the region to accept U.S. ummm, GMO and the issue was corn, maize. Yeah, and at the time, if I recall, in Malawi we didn't have the policy or regulations in place, in terms of how we would go about, which product would be accepted, if it would be used. That was not in place. So I think whatever decisions that were made at the time were based on lack of information by the government in terms of implications on taking GMO maize

MB: You felt like the government didn't have information, enough information

DN: I would say, because different departments in the government had different positions, so consensus was difficult

MB: Yes. Yes

DN: There's a National Research Council of Malawi, there's the Department of Agriculture, there's research stations, there's Department of Crops, within Ministry of Agriculture, then there's Environmental Affairs department, which is concerned about safety, biosafety and the like. Then there's the Bureau of Standards. So, you know, the government is a very big bureaucratic institution

and constituents from all these entities to say, let's make this decision from now, it took a lot of time, but eventually the decision was made. So I'm saying that the decision was made in the absence of regulations being in place, or guidelines, there were no guidelines. So it was an issue of, people are dying, we feed them or they die.

MB: Seems like a simple calculation

DN: Yes

MB: Um, were you aware of, or did you have any say in the conversation that was happening in the government?

DN: As WFP?

MB: Mmmhmmm, your organization

DN: Ummmm, it was just I think to provide guidance in terms of, or information, in terms of what it means, what GMO means, the implications. So the decision was ultimately government's. You know, at the same time, Zambia was also facing, was also going through drought. And if I remember correctly Zambia said no.

MB: You are correct, I'm actually studying Zambia and Malawi.

DN: Yes. Zambia said no, Malawi said yes. And Malawi said yes on the condition that we do a,b,c,d.

MB: And that was that it be milled before it entered the country

DN: Yes

MB: Ok. And did you feel that your organization had any say in the decision, other than advice, was there any say in it?

DN: No, it was more of guidance, yes advice to the government

MB: Ok. How were you informed of the decision, did you find out from the newspaper, did someone tell you from the government?

DN: Ummmm, I cannot trace the documentation, but obviously there must have been some correspondence between the government, I think, it should be Ministry of Agriculture or Department of Disaster Management Affairs indicating what the government decision is.

MB: Did you agree with the decisions made?

DN: Obviously, yes. So the corn from U.S. was received as a grain into the country, and then before it was distributed it had to be milled, yeah so, by…facilitated the milling

MB: Oh, ok, that's good to know

DN: Yeah

MB: Um, and did the WFP have concerns about health issues, or was it just, people are dying, we need to get this flour to them?

DN: Of course, of course, WFP had some standards in terms of safety. So all the food distributed is supposed to be certified as fit for human consumption. So I'm sure those checks must have been made on the maize meal, on the corn meal. Yes.

MB: Now, do they call it mealie meal here? That's what they call it in Zambia

DN: In Zambia it's mealie meal, in Malawi it's maize meal or corn meal.

MB: Did you have any pressure coming from individuals or organizations saying, you might have some pull with the government, please help? Such as other NGOs, farmers' associations, thing like that?

DN: Ummmmm, I think most of because, the government was not doing enough, people were starving, people were dying, so I think that helped to make the government to make the decision. Because it was a death situation, and the government wanted to be seen as doing something , and with the calls from all centers that the government should do something, I think it facilitated the government to make that decision. But also I think that if the government had alternatives I think perhaps they were trying to be aware of it, but I don't think there were alternative sources of grain at that time.

MB: K, and it was yellow maize coming from the U.S. at that time?

DN: Yes, it was yellow maize

MB: Which is not something Malawians eat

DN: Yes. We eat white, grain, non-GMO

MB: Ok. Was there concern that yellow maize wouldn't be eaten. That people would just reject because it wasn't what they were used to?

DN: No, I think there was some advocacy about what it is and that it should be accepted. Although there were some reports of diarrhea and all this all because of preparation, so there was also some messaging around how to prepare it.

MB: Ok, ummm. Let's see, we've answered that. So the government's current position is still, they are not a fan of GMO.

DN: Mmmmm

MB: But your country is in the same position it was in 14 years ago, now.

DN: Mmmmm

MB: Do you think that that will, that they will make the same decision? They have made the same decision, is that correct? Or have they not made it yet

DN: I think they have made the same decision, that the GMO maize can be accepted if it is milled before it's distributed, or its, yeah

MB: And the WFP is again facilitating that?

DN: There's no indicated contribution as far as I know, from the U.S. that they will be bringing GMO maize at the moment. Yeah, you may have to talk to the American

MB: Oh, I intend to

DN: To USAID, say, are you planning to give to WFP GMO maize or not. But at the moment I don't think the U.S. has indicated contribution of that kind.

MB: Ok. I've heard from others that there may be maize coming from Mexico. That's GMO as well, yes?

DN: No

MB: No, it's not

DN: It's not GMO

MB: Ok. So what are the main sources this time, of the food aid?

DN: It's Zambia. The maize is Zambian

MB: Really?

DN: Yeah

MB: Huh, ok. That is interesting

DN: So, they are buying from Zambia, and the traders, but if you talk to the traders they will also say that some is locally source, some is from across the border. So Zambia is the main source for Malawi at the moment.

MB: And what happens when Zambia is in trouble?

DN: Yeah, that's when are now looking at the international markets like Mexico and Ukraine and others

MB: But that hasn't started yet?

DN: No

MB: Ok, because you're depending on Zambia

DN: Yes.

MB: Ok, that's good to know. Any other comments?

DN: Have you talked to the Environmental affairs department?

MB: That's actually my appointment at 2:00

DN: Ok, because they make the regulatory framework on food biosafety technologies in the country. So, they may have the bill on biosafety regulations.

MB: Good, ok.

DN: And they are the ones who made that bill. There is also a national committee on biosafety. There's also the national biosafety regulatory committee.

MB: OK. I will look into that when I'm there.

DN: Yeah.

MB: Do you know of any official sources for documentation in the WFP?

DN: The information in the WFP is kept for 5 years and then it's archived. So that means going into the archives, so the information that you could find, it would only go as far as 5 years back. Beyond that, it's sent to the archives.

MB: Ok, that's good to know.

## C.9 Tamani Mvula Nkhono

Tamani Mvula Nkhono, National Director of CISANET
Residence, Lilongwe, Malawi, 8-16-16

TMN: It's been awhile

MB: Yes it has

TMN: I think that time the challenge which was there was that, the country was faced with a crisis.

MB: Mmhmmm

TMN: And there were people that were dying of hunger. And they knew when the government made an appeal for food, there was this donation that came from the U.S. , WFP of genetically modified food. Now, the issue at that time was that genetic engineering was a largely new thing

MB: Mmhmmm

TMN: There were a lot of myths about GMOs, how GMOS are made, the effects of GMOs, all those things. So there was all that talking, especially, because much of the position was coming from the EU. NGOs and the EU. So, you know CISANET is a network of a number of NGOs.

MB: Mmhmmm

TMN: So others anti, the food and others were for it. Those that were for it put forth an argument that they are not documented evidence that people have died after eating GMOs. Of course there is all this talk that it can cause all sorts of health problems, but there is no evidence for that. As a matter of fact, much of the food that is eaten contains some trace, especially processed food, contains some trace of genetically modified food. It would not only be maize, but maybe potatoes.

MB: Mmhmmm

TMN: Now, the other thing was that the region in general, the region I'm talking about is the Southern region. Countries such as Mozambique and Zambia, there were those countries that openly said no.

MB: Yes, I'm also studying Zambia because of that

TMN: Yes, the president then of Zambia put it clear that he would rather die than eat genetically modified food. Mozambique also had the same stand, but I don't think Mozambique was as tough as Zambia. Now the issue was that the maize was supposed to go through Mozambique. So South Africa at that time was still accepting genetically modified food, so our maize entered through, was it through

Durban. But it had to be milled. There was a fear that if it goes through Mozambique, one grain would fall on the ground and genetically modify the crop.

MB: So it had to be milled in South Africa?

TMN: Yes, it had to be milled and of course not all of it was milled because there were others who received the actual maize.

MB: Mmm

TMN: Now at CISANET our main concern at that time was that as a country, because this has just come, it's an issue that we never thought we were going to come face to face with it. So the institutional framework was not there. We didn't have policies, we didn't have laws to manage issues of biosafety. So at CISANET we wanted to push for a policy to be there. What is the policy of government for the genetically modification. Because with the coming of this maize- this maize would be accepted because we would say...and we had also engaged some experts at Bunda, some experts in biotechnology who helped us in terms of giving us the information. All about genetically modification, and evidence and all those things. So the people from Bunda were of the view that there is no problem with these things. Whatever is being said is just politics and not necessarily that if there could be challenges, fine, maybe in the long run, but the choice is there: eat this food and be alive, or die of hunger. So that was the choice that people were being faced with. So at CISANET it was difficult for us to stand and say, we don't want this, because in the country there was very little knowledge, and the experts are saying it's ok. So we didn't have a good basis of saying no, though we had organizations like ActionAid and other, Oxfam, and other NGOs who were opposing this thing.

MB: Oh

TMN: Yeah, but we said, ok, fine, but let us come up with the policy. We may accept this because of this crisis, but what about from here onwards? What will happen if people plant this maize? What will happen if Bunda wants to do research? What will happen if Monsanto comes up with a variety that is genetically modified? It may not be maize, but BtCotton is still something which is genetically modified. What is the government policy?

MB: Mmmhmmm

TMN: Yeah, so at CISANET we initiated that process.

MB: Oh

TMN: But at the same time because this maize was coming into the country, there was also a process of coming up with the biosafety Act for the country. So the Biosafety act and the policy, we started with the act because we needed to come up with the act fast enough so that we knew this maize landed into the

country, there at least was an act of government. But it was to be an interim regulation so that we'd come up with the policy and then form there we can develop and strengthen the Biosafety Act. Yeah, so at CISANET when that policy was being developed, we did, what we then used to call People's Voices, so we hear what people are saying. We tried to explain to them what GMOs are, and what do you think needs to happen and all those things.

MB: Who were these people?

TMN: These were now NGOs, especially local NGOs, but CBOs, community based organizations, farmers, and all those things. But of course we had to explain to them the little knowledge we had of what genetic modification was all about, the effects and all those things, and what people were saying about it. But one of the biggest gaps that we had at that time was information and knowledge. It seems it was something that came, it was a necessary evil that needed to be accepted. But we did not have much information.

MB: Yes, it seems like from what I've talked to other people about, there was little knowledge but a lot of belief about what was going on.

TMN: Yes, so, as you said there was little knowledge, but the thing is, because there were people who were hearing convincing arguments from both sides, from the pro-GMO and also the anti-GMO. All sides were putting forth cases that made sense. So for us we needed to go for people we felt could be neutral, and that was the university. So the university at that time, most of them were pro-GMO. I'm saying this because there were other people in the government, who were also experts in genetic modification who were very much against this thing. And we had professors at Bunda saying, no, it's fine, don't worry, many people have been eating this and all those things. So we found ourselves in a situation where we now need to confront government, so the question is, what type of message are we taking to the government? But by that time the genetically modified flour had already come, the position was already done.

MB: Did you get a biosafety act done in time?

TMN: I would say no, because we had the GM flour already in the country when the act was not finalized. Yeah, but to me I think that the act was not necessarily looking at the current consignment at that time, but what's next, what will happen after this? Because if we had accepted the GM maize into the country, or GM flour into the country, I think they're eating and nothing is happening, there was a feeling that others would come and just start doing it, but now we need to control. We may have accepted because of the crisis, but beyond that there is need for control so that at least people follow procedures when they are researching these things.

MB: Ok

TMN: Yeah. Sure

MB: Let me look through my questions because you've answered a lot of them.

[Irrelevant chitchat]

MB: First of all, let's go back a little bit, your title is director of CISANET?

TMN: National Director

MB: Ok. Who were the individual organizations who were for bringing GM in?

TMN: Among the NGOs?

MB: Yes

TMN: Well, the thing is that the challenge was…those that were not for; they were not as vocal as those that were against.

MB: Ok, why do you think that is?

TMN: Well, the other thing is that the influence was coming in from the donors. Those that were being supported by the European Union, ActionAid, Oxfam, they were for. They were the ones that supported CISANET at the time. Then there were others like World Vision, they were for, but not as vocal as these others. I think maybe it was because how genetically modified crops were greatly demonized at that time. I think you look at the stand of Zambia which had great influence over the region. All of us knew what President Mwanawasa had said. So I think that for these NGOs to stand and say it, maybe they felt that they may be working against their wealth. So we had those others CRS, World Vision and others which were for but were not that vocal.

MB: Now, I understand that part of the problem was that right before the crisis hit Malawi had sold off their grain reserves at the urging of the IMF and the World Bank. Do you know anything about that?

TMN: Yes. Yeah, ummmm I think what had happened was that, because this was in 2000-2001. If you look from 1997, 97, 98, 99, Malawi was having a surplus. There was a program called Starter Bank. Starter Bank was a program supported by DFID, European Union and the Malawi government. And the Starter Bank was a program that was giving corn to small farmers. A pack, and in that pack there was seed, fertilizer, two types of fertilizer, two types of seed, and maize. So that helped in terms of boosting production. So in 1997 we had a surplus.1998 we had a surplus. 1999, yeah, there was a surplus. Now, what was happening was that, because of this surplus, the maize in the strategic grain reserve was just staying. Of course, there couldn't be a release onto the market, but because of the surplus there was a feeling that maize was rotting anyway because it had stayed for some time.

MB: Ah yes.

TMN: So, now in terms of managing the reserve, it was very expensive. Because there wasn't a need to release maize onto the market because there was already oversupply. So strategic reserve had to keep the maize, I think for 3 years. Now, there was a recommendation from these institutions, the World Bank, and EU, and IMF, to, there was a recommendation of why can't we offload this maize? We offloaded it, maybe exported it, whatever, because it would be easy to buy again on the world market, to replenish the strategic grain reserve. Yeah so, I think it was out of that recommendation that the government decided to sell to Kenya. But, these strategic reserves are supposed to be replenished immediately. After 3 months they are supposed to be replenished. Now, because of the supply that was on the market, the grain reserves stayed empty beyond the time they were supposed to. Maybe there was a feeling that in the next, in the other year's harvest we can buy maize from the market and refill the grain reserves.

MB: Mmmm, so they were counting on the surplus continuing.

TMN: Yes. Now what happened is that in 2000 there was a drought, so they were caught unawares, there is no maize in the strategic grain reserve, which they had exported, and there was a drought, meaning they had to find grain somewhere for the reserves. So it was in such a situation that they found themselves to have no maize in government reserves. And now there was now this influx of genetically modified maize, food aid and all these things. Yeah, but the mistake the government did was not to replenish the grain reserves immediately, which is the rule. They are supposed to have maize for crisis.

MB: Yeah, I passed some of the silos yesterday and there were just trucks for kilometers, lined up. Ok, let's see. So have things changed in any significant way since the decision was made. Do you feel like the attitude towards GMO has changed?

TMN: Well, to me I think it has not changed. There's still a lot of resistance in terms of, because up until today I think, I don't think that there is a general consensus on whether genetically modified food are health hazards or not. Because that argument which is there is that most of the genetically modified crops come from countries like U.S., Mexico and all those. And the message which is going around is that in those countries it's not people that eat it, it's animals. So now, the question is, why they are feeding it to animals and not humans. But the thing is, what I am trying to say is that I don't think there is a consensus on the health hazards of genetically modified food. So as much as there is a general feeling that people have some information, that they can make an informed decision, but the fear is still there. Even the people that the ones I talked about from government and Chitedze, there are still people there who

argue against it. They're going to give you presentations showing you the tests that they did on a rat, on how a rat is looking and all those things. So, with that it is difficult to make policy decisions. And the government, we have a problem with bananas in Malawi where we have lost, I think we have lost about 70% of our bananas to banana….disease. Now the research that is being done now, they have come up with GM banana. This variety has been imported from Australia and is being tested on a research station. But now the question is, how is it going to be accepted, is it going to be accepted. Because the guy doing the research is saying that this banana is different than most bananas because it doesn't produce the genetically modified protein. There are terms they are using, R, something like that. So this is safe to eat because there is no genetic modification of the type of proteins that come out. So the question is, I mean the issue is as long as it is called genetically modified, the guardians of whatever are going to explain, it's that attitude which is, which needs to be changed for us to fully accept it. But because of maybe talking about these things, and also maybe putting forth an argument that the people who ate the maize in 2000 are still alive, they are not dead, well, these things can be eaten. I think that's now the argument which is going on.

MB: That's a good argument

TMN: But still the fear is still there because those that are in the know, they are still arguing about this thing. So for some of us who are waiting for ideas from them, and this one is saying this, that. It's still argued.

MB: You might be interested, the National Academy of Sciences in the U.S., last month came out with a report on genetically modified food, they concluded that there is no harm in it. So that was big in the U.S. So, it just so happens that your country is in the same position right now.

TMN: Yeah, of course.

MB: What is CISANET doing, or are they doing anything this time around?

TMN: Well, of course we have been asked so many questions about this as to the likelihood because the government will be importing maize from Mexico, from Ukraine. Of course maybe Ukraine could be safer than Mexico, but the likelihood of having genetically modified food is there. Now, as for CISANET, we have not come up with a complete position on this, but our argument has been the same like the one we had previously. That we are in a crisis. If people don't eat this maize, they will eat something else. And the something else that we eat is much, much worse than this maize. So I may say that the official position has not been established. We are yet to. We will be having a meeting in October, the first of October. So one of the presentations that will be made is on genetically, all on biotechnology. Because what will go on as an institution is first it will have as much information as possible so that when you are putting forth an argument on

something, at least it is something that is informed by sound research, because the problem is that there is a lot of emotion in the argument. Sometimes you see people that, I mean the fears that are presented sometimes, they are unwarranted fears. Because you look at the level of argument and what they are putting forth, because at CISANET we have said we accept this, but with caution.

MB: Of course

TMN: There are less, for example, you talk about BT Cotton. BT Cotton is not edible. Of course there are seeds that come out of that, but the understanding we have is that when there is refining it's much safer to eat a refined genetically modified something, but those are the arguments that are coming forth, but what I was saying is that BT Cotton is acceptable to us, looking at what it can do, what it does. Because if you look at the cost of production in cotton, about 40% of that is chemicals, so if we go for BT Cotton we should be able to reduce the cost of production by at least 40%. Not from labor, but from chemicals. But if you make that economic argument some will come with an environmental argument, so sometimes it's all chaos at the end of the day. But because maize is edible, that's when I say, let's be cautious, let's have as much information as possible before we make that decision.

MB: Yeah, I spoke with Dr. Kingdom Kwapata at Bunda College and he said that they're doing BT Cotton trials, but they're also doing BT Cowpea, which is edible. So they're moving towards that.

TMN: Yes, you know I sit on this committee, what do they call it, Agricultural Biotechnology something, so of course it's been awhile since I attended their meetings and this issue was presented.

MB: Is this a national committee, what is this?

TMN: There is a national committee on biosafety, but this is a subcommittee on agriculture. So this issue was presented, the cowpea and also the banana, but of course, as I said in that meeting it was only those that are against who were in that meeting, because it was all government. So the argument was no, let us grow peas and all those things, but Bunda was given the go ahead because I think the, how they had put it, the, they had presented it as though their research was for academic purposes and not necessarily they were going to release a variety of cotton. But somebody was going to do a PhD on this and then he wants to research it. So it was on that basis that it was accepted. So I don't know if they have certificated that they can do trials on something which can be eaten. So it's been awhile, you should ask someone else is better informed on this.

MB: Ok. Did you feel that your advocacy was effective, I mean obviously it was effective because they accepted the food, umm, let's move past that. Do you have any other comments?

TMN: Ummm, well maybe the thing is that what happened before is that when we are drawing these policies I think maybe it was because of the timeframe, and also the fact that genetic or GMOs, it was something that was alien to this part of Africa. I think we did not have a benchmark in terms of how does a biosafety policy look like. The only probably inference that this may be American, Mexican all those, but what about an African country that has accepted this? And then what about the effects? How are they doing? Of course we had some…that we are poor. But looking at the level of position that they were facing I think our policy was not developed on a good basis. So I think with what has happened they maybe need for us to review our policy and try to put into place measures that are looking at what other countries are doing or have done and then maybe we can learn from them.

MB: But you were essentially pioneers in this.

TMN: Yes, our role as I said that it was mainly to seek for advice from people. We said as CISANET, we said that we need to make sure that the government position on this is normal. This food, the GM food at that time, we accepted it on moral grounds, people were dying. We have maize others have given which we don't have evidence that some have died because of it. The choice that we have is let them do it so that they survive at least for one year. Let them not die of hunger. So it was on that moral basis that it was accepted, but now we said that beyond this let us make sure that we have got a position as a government, a policy as a government. Yeah, so the good thing that the government was of the view and then the process went on.

MB: Ok. Do you know of any sources that I could, documentation sources that I could see such as minutes, meeting minutes, things like that from either CISANET or other sources?

TMN: Yeah, I can try to look at some of the documents that we had produced then, but as I said it's been awhile.

MB: It has been awhile

TMN: Yeah, I will try to go through some of the documentations. And I don't know, have you met Dr. Beniss? Dr. Beniss is the one I talked about who was against all this. One who didn't want to hear.

MB: So he was in the government?

TMN: He was in the government but now he's started his own company. So I think he may also be an interesting person to meet. So in terms of documentation I can look for them. I think Beniss will also have information.

MB: Do you have any contact information for him? And that was my next question, who else can I talk to?

## C.10 Yanira Ntupanyama

Dr. Yanira Ntupanyama, Chief Director for Environment and Climate Change Management, Ministry of Natural Resources, Energy and Mining

Ministry of Natural Resources, Energy and Mining offices, Lilongwe, Malawi, 8-17-16

MB: Yes, it was a long time ago, it's hard to remember. Ok, so what was your position in 2002?

YN: Actually I was principal environmental officer, so the positions in the government is such that you start with like, the professional officer, and then the professional officer is someone with a degree, a starting position in the government. So you get promoted to a senior and then after that you interview and you become after that a principal environmental officer, so I was a principal environmental officer. Now I know, I must have been a Chief Environmental Officer, which is equivalent to Assistant Director. So in each, in the departments, the Department of the Environment, we had different sections. So the Assistant Director, or the Chief Environmental Officer would have been responsible for planning, policy and planning. So I was in that department, that section rather. Um, and then there's a section for Environmental Impact Assessment, and for Environmental Outreach, which deals with the formation and such, and then we also had a section on legal. So, at that time I was a Chief Environmental Officer responsible for biodiversity, and because biodiversity and the conventional biodiversity, then we have the protocol, biosafety protocol, so I was dealing with that too. But I also had a biosafety officer.

MB: Ok, so I'm going to ask you questions about that time, and if it's in the background you've given me, just tell me, refer to the background. Ok, did you have a role, or did you know of the decision being made to accept or reject genetically modified food aid?

YN: Yeah, we, I basically knew because the biosafety committee is under the Environment Department, and I was part and parcel of it, so I was the secretary of the biosafety committee. It was being chaired by, I think it was being chaired by Agriculture. So in issues relating to genetically modified have to go through that committee, but it also has to go through a committee in Agriculture which I think deals with species and what. Yeah, so it had to go through our committee. We debated about it, we had to find out what is the best way to bring in this? Knowing that I think the main concern was that even myself or even my grandmother, if she sees the seed and thinks, oh this seed looks unique and she would try to plant it. So the concern was that someone in the village or someone who was interested in crops would decide to plant it. So if they plant it, then what next? I think at that time we struggled with issues that bringing genetically modified seeds or crop into the country might end up having problems that other

countries in Canada, framers have had problems with Monsanto, where you find some of the genes in farmers' land and then people start questioning, so where did you get this? But on the other hand we did want to conserve our genetic maize and the vitamins, so we didn't want it to be polluted. I have a background of agriculture, so I worked at Chitedze Research Station almost 10 years.

MB: I was there yesterday.

YN: Yeah, so I worked there.

MB: Ok. So your main concerns with not having it in the country were: you didn't want to get in trouble with companies, potentially.

YN: Potentially, yeah. Potentially, first we didn't want our people to start planting it.

MB: Now, why?

YN: If they planted it, I think at that time the reasoning was, then there would be cross pollination with our crops. But on the other hand, being a hybrid, they harvest anyway, probably they wouldn't harvest. Because.

MB: You thought they wouldn't grow

YN: Yeah, it would grow but then at the end of the day the potential harvesting wouldn't be there. But the main issue was polluting our own.

MB: You wanted to keep that

YN: And then when you go out of the country and when you read a lot you learn that sometimes they also get in trouble with the genes. And the genes that are probably being protected by certain companies, are now being found in the farmers' fields.

MB: OK. So how many people were on the national bio safety committee?

YN: Sure there were many, because if I can recall, because the bio safety committee is still the bio safety committee, we still have it. I am

MB: Are you still on it?

YN: I'm not still on it because my position is, has changed since then because at that time I was just the chief environmental officer, dealing with a very technical issues, trying to implement the convention and also trying to implement the, trying to make people understand the fire safety protocol, the Cartagena protocol. Yeah, UMMMM so, I'm not in that position but I do recall that we have a consumer Association of Malawi and they can make noise and they cannot accept things which probably you understand.

MB: Mmhmmm.

YN: We also have a people from the police

MB: Why is that?

YN: We want them to monitor what's coming in and what's going out of the country. We also have people from gender, minister of gender

MB: Ahh, yes

YN: Because whatever is coming out of the biosafety should be… to the masses, and the underprivileged should be…we have people from The forestry research Institute of Malawi because genetically modified organisms are not on just crops that end up in our food chain, but also forest issues that are genetically modified. Agriculture is in charge of it. And I think that's as far as I can remember. We also have fisheries, yeah we have fisheries.

MB: OK, so this, if you can recall and it might be in here, when was the committee about genetically modified food eight specifically? Was it 2002?

YN: I think it was 2002, we had some meetings, we had some meetings when basically it was meetings to decide how do we deal with the situation that we have, that we are in. Our people need food, and we also need to protect the biodiversity of the country, which is our varieties in the country. So in 2002, we've had these meetings before so that we're not having them just because of this. We dealt with these issues

MB: This was an ongoing concern

YN: This is an ongoing thing. So it was in a special meeting where there are special issues now coming up. So we need to deal with them. And after deliberating over it and the minister of agriculture was also deliberating over it, well people need food and what and as we are saying no, we don't wanted to because it's genetically modified, how best do we do it so that it's milled,  Bring it milled so that no one uses the seed.

MB: Mmhmmm

YN: So it was in 2002. But on the other hand while we had made a decision, because that year was a unique year you learn from the paper that as in southern Africa we depend on each other. So if rains were not good this year and there was good rain in Zambia, we would import seed, we would import food from Zambia. We would import food from Zimbabwe, but that year all the neighboring countries had also drought, so it was a unique year where you had to import now food from as far as USA. And then you end up with genetically modified food, so

that's the reason why we really had to debate over it. On the other hand, you should also, I don't know what do you know that in some countries when you are exporting your food, let's say this year we import the genetically modified food aid and it so pollutes our seed, there are other countries who do not want any trace of genetically modified organisms into there

MB: Were you concerned about any countries in particular?

YN: Not really, it was just the debate. It wasn't like unique debate. I know that there's been some debates over cotton, cottonseed. Bringing in genetically modified cottonseed. I don't know if that's true, that other countries don't want to import cotton that is genetically modified. Yeah, because I think I've moved further from that, dealing with those issues, so I really don't go deep into it. But anyway, the cotton we have confined trials.

MB: I actually spoke with Dr. Kingdom Kapwata.

YN: Oh, you spoke with him, did you talk with Victoria? The lawyer? Because she is the one who's dealing with this now.

MB: OK, I, if you have her information I would love it now.

OK, I will definitely give it to you. She's working on a deadline on biogenetic.biodiversity so she's not in the office today, but if you can find out and meet her tomorrow because the other lady who deals with it is not in the country. It's 0994643138.

MB: What is her last name, her surname?

Victoria Kachimera. She's our chief legal officer.

MB: OK, I will phone her. OK, so once your committee reached a consensus, and was there a consensus, or was there just kind of a majority vote?

YN: There was no voting, it was just a consensus. We did a lot of consultation because we didn't want people to come back and say it was made by the committee, they didn't consult the country, so we consulted widely.

MB: OK how did you do that consulting?

YN: It wasn't an issue of, that we are specifically addressing that issue, but if you bring genetically modified food, would you bring it in the form that it could be planted and what would be the reasons? Said they would give us and then they would say. At the end of the day most of the people would say mill it.

MB: So are you saying you sent out people into the country to just ask?

YN: We invited stakeholders.

MB: You invited stakeholders, OK and who were the stakeholders?

YN: NGOs, line ministries, International organizations, like you NDP. So we invited lots of people.

MB: And asked them what they thought.

YN: What they thought about genetically modified food. We did provide information, we may presentations, and then they would debate over it. So we made like neutral kinds of presentations on what genetically modified, because you know people have strange thinking about genetically modified. They would say that you inject in a gene that is from a pig to a tomato, all those kinds of things. So we provided the information so that when this maize comes they do appreciate what it is.

MB: Yes.

YN: Because if people receive something when they're hungry they might even say no, I'm not eating it

MB: Because they're afraid of what it is.

YN: Mm mm

MB: And once your committee had consulted the stakeholders and decided where, who did you make your recommendation to?

YN: Actually, what happened is that agriculture is supposed to apply to us.

MB: Who is supposed to?

YN: Agriculture.

MB: They are supposed to ask you?

YN: Yes. So we respond and say OK, you can bring it in but in a milled form.

MB: Ah, ok, so they asked you

YN: But on the other hand we also at that time were conscious of the fact that we didn't have a policy, we didn't have a legal structure, a policy we didn't have. So I think in this briefing on the third page, yeah, we published a biosafety act.

MB: OK.

YN: In September 2002.

MB: That was fast.

YN: Yeah, though you might, you know it was fast because we needed to defend ourselves, in case somebody took us to court.

MB: Yeah, that was a concern.

YN: So it was done quickly, we need to do a better job on this, because it changed. Yeah, but, it hasn't changed, we haven't revised it yet, yeah but you can see that after the act now that's when we we're doing things backwards, that's when we had the national bio technology and biosafety act that was approved by committee in 2008, so you can imagine that we rushed over the legal thing and then we went back and said, oh we don't have the policy.

MB: Do you know where I can get these policies, a copy of these policies?

YN: I used to have them, unfortunately if you had called me before you came I would've had them for you, but Victoria must have, in fact she's the one who's mostly keeping up on these things. I will check, but I think Victoria must have. I'm not sure whether they have uploaded it on our website.

MB: Which is your website?

YN: Let's see, I should write it down right there. But have you also talked to this guy who's ummm, I can't remember what he's working on, but there's a certain guy who is in the science and technology, national science commission.

MB: I don't think so.

YN: You haven't talk to him? He would also have been very influential on the committee.

MB: Do you have his name?

YN: It is Mkoko.

MB: Was there anyone in particular who was very opposed to bringing in the food? Any, either organization or person?

YN: You know what, I really can't remember, but I would assume that at that time, we've always had problems with the Consumer Association of Malawi. Very assertive, very aggressive in addressing issues of food safety. So as much as

possible they would love people to bring in things that they are so sure that it's safe.

MB: OK.

YN: Yeah, so at that time I think, we had meetings all over the country, so I remember that in the southern part of Malawi they really make noise. At that time it was like, oh bring it on the table, and let's see what kind of noise they can make. Yeah, so they think it's OK for people to start when in actual fact you can get some help. So I can remember those. Apart from that, I mean agriculture was troubled either way, so there was no way they could criticize but usually in terms of bringing in a technology, agriculture has always been negative. But the fact that it was food, they, they were very cooperative, and anyway they were the ones who are asking for it.

MB: OK. OK. Good. Is the consumer Association of Malawi, do they have offices in Lilongwe?

YN: I'm not so sure.

MB: OK, I can look it up.

YN: I have a number for their boss, do you have his number?

MB: I don't.

YN: This is the number.

MB: OK, thank you.

YN: And I do remember even that when we went to sign the Cartagena protocol on biosafety, which was signed in in 2000, we did get a lot of criticism from agriculture, despite that we had consulted before we went to sign the protocol, we did consult. And the reason we wanted to sign it is because we knew at one time we would be faced with this problem, when we needed food from other countries that might be GMO, and we need to have the protocol, at that time we were not a party but we were just a signatory to the protocol. So to a certain extent I remember that one of the principal officers, very senior, said why did you send this? When they came with the request that they wanted the GMO maze, we had to refer her back and say, but you didn't want us to sign this.

MB: OK. Any other comments?

YN: Well, it's not that easy when it's a new thing, as I indicated. People talk a lot, people don't understand genetics, they need to… People so that they can understand why genetically modified organisms can be imported. On the other

hand, people are also fed a lot of information on why GMO's are not good for the country. But in this year, and this time around where we have climate change issues, there is need to adopt any technology that will bring in food on the table. That's why it's important in African countries. But, cautiously. And we've been doing that cautiously, that's why we have confined trials.

MB: Like that BT cotton, BT cowpea.

YN: Yes. But on the other hand we cannot say that we will stop any scientific research on that. We also want to be progressive. To research that would assist us, to harvest by the end of the day and bring food to the people of Malawi. It hasn't been easy. To say, I'm a government official so I'm not supposed to say this, but I think the Ministry of adequate culture is very, very strict in terms of genetically modified organisms.

MB: Do you think overly strict?

YN: Overly strict, yeah. Because with the cotton we had to find ways how to bring it in knowing that the Malawian farmer would not be able to buy pesticides, but if they have the BT cotton then they would be able to still produce cotton, but without buying loads of pesticides.

MB: So it's cheaper.

YN: it's cheaper, yeah.

MB: OK. All right, well thank you so much for your time.

YN: Thank you, I thought it was going to be very difficult.

[Both laugh]

# C.11 Ephraim Nyondo

Ephraim Nyondo, Senior News Analyst, The Nation, Malawi Newspaper

Telephone Interview, Lilongwe, Malawi, 8/5/16

What were your perceptions of the effectiveness of food aid in your country prior to 2002?

What were the primary reasons for the decision in 2002?

In a situation where there was a serious food shortage, most of all maize.

What were the primary reasons against continuing to accept GMO food aid?

They said we were being, ethical reasons, concerned that if you plant the GMO maize it would effect the land and the land would be bare, so you couldn't grow other crops there

Gmo maize would make people sick, traditional beliefs

How was the decision made? The government, the cabinet, minister of agriculture made the decision

On what level was the decision made?

Who did the research on the scientific aspect? Office of the president

Who was consulted?

Was there pressure coming from organizations outside the government?

a. NGOs?
b. The scientific community?
c. Farmers' or Growers' Associations?
d. Other organizations?

They were in a crisis, people were dying, some other NGOs were opposed, but they were a nation in crisis. There was original concern

Was there talk of future consequences or opportunities if you went one way or the other? What possibilities were discussed?

10. Was there a discussion of possible consequences from the U.S.? If so, what was the discussion?
He doesn't recall

11. Was there a discussion of possible consequences from the EU? If so, what was the discussion?

Was there a discussion about what would happen to the people who needed the food aid? If so, what was the discussion?

Do you know of any official sources that I could get access to? Meeting minutes, scientific papers read, official decisions, etc.?
Sector registrar, department of environmental national commission for scientific knowledge- literature on the issue , University
18.Do you know of anyone else I should speak to? Moses Kapwata? Dr. Charles Mataya?
He will send

18.May I use your name when I contact potential sources?
Yes

Essentially, they had no choice, they were a country in crisis

## REFERENCES


Abelson, R. P., and Levi, A. (1985). “Decision Making and Decision Theory.” In G. Lindzey & E. Aronson (Eds.), *Handbook of Social Psychology* (vol. 1, pp. 231–309). New York: Random House.

Aldrich, John H., Christopher Gelpi, Peter Feaver, Jason Reifler, and Kristin Thompson Sharp. 2006. “Foreign Policy and the Electoral Connection.” *Annual Review of Political Science.* 9:477-502.

Alt, James E. 1987. “Crude Politics: Oil and the Political Economy in Britain and Norway, 1970-85.” *The British Journal of Political Science.* 17(2): 149-99.

Alt, James E., Randall L. Calvert, and Brian D. Humes. 1988. “Reputation and Hegemonic Stability: A Game-Theoretic Analysis.” *The American Political Science Review.* 82(2): 445-66.

Anderson, Kym and Lee Ann Jackson. 2005. “Some Implications of GM Food Technology Policies for Sub-Saharan Africa.” *Journal of African Economies.* 14(3): 385-410.

Anderson, Kym. 2010. “Economic Impacts of Policies Affecting Crop Biotechnology and Trade.” *New Biotechnology.* 27(5): 558-564.

Andonova, Liliana B. 2008. “The Climate Regime and Domestic Politics: The Case of Russia.” *Cambridge Review of International Affairs.* 21(4): 483-504.

Artis, Michael and Sylvia Ostry. 1986. “International Economic Policy Coordination.” The Royal Institute of International Affairs: Chatham House Papers.

Attwell, William. 2013. “’When We Have Nothing We All Eat Grass’: Debt, Donor Dependence, and the Food Crisis in Malawi, 2001 to 2003.” *Journal of Contemporary African Studies.* 31(4): 564-582.

Axelrod, Robert, and William D. Hamilton. 1981. “The Evolution of Cooperation.” *Science.* 211(4489): 1390–96.

Axelrod, Robert. 1981. “The Emergence of Cooperation Among Egoists.” *The*

*American Political Science Review.* 75(2): 306-18.

Axelrod, Robert. 1984. *The Evolution of Cooperation.* New York: Basic Books, Inc., Publisher.

Axelrod, Robert, and Robert O. Keohane. 1985. "Achieving Cooperation Under Anarchy: Strategies and Institutions." *World Politics.* 38(1): 226-54.

Azadi, Hossein and Peter Ho. 2010. "Genetically Modified and Organic Crops in Developing Countries: A Review of Options for Food Security." *Biotechnology Advances.* 28: 160-168.

Bailard, Catie Snow. 2016. "China in Africa: An Analysis of the Effect of Chinese Media Expansion on African Public Opinion." *The International Journal of Press/Politics.* 21(4): 446-471.

Baum, Matthew A. 2004. "Going Private: Public Opinion, Presidential Rhetoric, and the Domestic Politics of Audience Costs in U.S. Foreign Policy Crises." *Journal of Conflict Resolution.* 48(5): 603-631.

BBC, "Malawi Profile, Timeline," http://www.bbc.com/news/world-africa-13881367 (accessed November 1, 2017).

BBC, "Zambia Profile, Timeline," http://www.bbc.com/news/world-africa-14113084, (accessed November 1, 2017).

Bennett, L. W. (1981). "Perception and Cognition: An Information Processing Framework for Politics." In S. L. Long (Ed.), *Handbook of Political Behavior* (vol. 1, pp. 69–175). New York: Plenum.

Blaney, David L. and Mustapha Kamal Pasha. 1993. "Civil Society and Democracy in the Third World: Ambiguities and Historical Possibilities." *Studies in Comparative International Development.* 28(1): 3-24.

Blavatskyy, Pavlo. 2009. "Betting on Own Knowledge: Experimental Test of Overconfidence." *Journal of Risk and Uncertainty.* 38(1): 39–49.

Bodulovic, Greg. 2005. "Is the European Attitude to GM Products Suffocating African Development?" *Functional Plant Biology.* 32: 1069-1075.

Bor, Jacob. 2007. "The Political Economy of AIDS Leadership in Developing Countries: An Exploratory Analysis." *Social Science and Medicine.* 64: 1585-1599.

Bote, Takaitei, “Genetic Modification Poses a Threat to Indigenous Seeds,” *The Daily News*, October 4, 2002. http://allafrica.com/stories/200210040219.html (accessed August 15, 2017).

Bote, Takaitei, Governments, Scientists Seek Alternative to GM Technologies,” *The Daily News,* October 10, 2002. http://allafrica.com/stories/200210100753.html (accessed August 16, 2017).

Bowen, Glenn A. 2009. “Document Analysis as a Qualitative Research Method.” *Qualitative Research Journal.* 9(2): 27-40.

Bowman, Andrew. 2015. “Sovereignty, Risk, and Biotechnology: Zambia’s 2002 GM Controversy in Retrospect.” *Development and Change.* 46(6): 1369-1391.

Broadbent, Emma. 2012. “Research-Based Evidence in African Policy Debates: The Contemporary Debate on Genetically Modified Organisms in Zambia.” *Evidence-Based Policy in Development Network.* https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/9122.pdf (accessed November 7, 2017).

Broman, Thomas H. 2002. “Introduction: Some Preliminary Considerations on Science and Civil Society.” *Osiris*. 17:1-21.

Brooks, Arthur C. 2002. “Does Civil Society Stop the Downward Spiral of Bad Government or Speed It Up?” *Nonprofit and Voluntary Sector Quarterly.* 31(1): 140-144.

Bullock, John G. 2011. “Elite Influence on Public Opinion in an Informed Electorate.” *American Political Science Review.* 105(3): 496–515.

Burnell, Peter. 2010. “Zambia’s 2001 elections: The Tyranny of Small Decisions, ‘Non-Decisions’ and ‘Not Decisions.’” *Third World Quarterly.* 23(6): 1103-1120.

Bueno de Mesquita, B. (2002). “Domestic Politics and International Relations.” *International Studies Quarterly.* 46: 1–9.

Cantril, H. (1967). *The Human Dimension.* New Brunswick, NJ: Rutgers University Press.

Caraway, Teri L. 2004. “Protective Repression, International Pressure, and Institutional Design: Explaining Labor Reform in Indonesia.” *Studies in Comparative International Development.* 39(3): 28-49.

Carothers, Thomas. 1999. “Civil Society.” *Foreign Policy.* Winter: 18-29.

Carroll, Rory. “Zambians Starve as Food Aid Lies Rejected.” *The Guardian*. October 16, 2002. https://www.theguardian.com/science/2002/oct/17/gm.famine1 (accessed October 31, 2017)

Carroll, Rory. “Zambia: GM Food Refusal Sets Precedent.” *Mail and Guardian (Johannesburg)*. November 1, 2002. http://allafrica.com/stories/200211010493.html (accessed August 17, 2017).

Carter, Brett L. 2016. “How International Pressure Can Help.” *Journal of Democracy.* 27(3): 36-50.

Chanda, Richard, Personal Interview, August 23, 2016, Lusaka, Zambia.

Cheng, Li, and Lynn White. 1990. “Elite Transformation and Modern Change in Mainland China and Taiwan: Empirical Data and the Theory of Technocracy.” *China Quarterly.* 121: 1–35.

Chidyaonga, Scholastica, Personal Interview, August 11, 2016, Lilongwe, Malawi

Chifuwe, Sheikh, “Sata Criticizes Government’s rejection of GM Maize,” *The Post,* September 12, 2002. http://allafrica.com/stories/200209120414.html (accessed August 16, 2017).

Chifuwe, Sheikh “People are Genuinely Starving- Cupper, *The Post,* November 18, 2002. http://allafrica.com/stories/200211180242.html (accessed August 16, 2017).

Chola, Beatrice, Personal Interview, July 7, 2016, Chizanga Compound, Lusaka, Zambia

Choongo, Kennedy, “Political Watch: Establishing Safety of GM Maize,” *The Post,* August 2, 2002. http://allafrica.com/stories/200208020057.html (accessed August 15, 2017).

Clapp, Jennifer. 2005. “The Political Economy of Food Aid I and Era of Agricultural Biotechnology.” *Global Governance.* 11:467-485.

Clapp, Jennifer. 2012. *Hunger in the Balance: The New Politics of International Food Aid.* Cornell University Press.

Cooke, Jennifer G. and Richard Downie. 2010. “African Perspectives on Genetically Modified Crops: Assessing the Debate in Zambia, Kenya, and

South Africa." *Center for Strategic and International Studies.*

Creswell, John W. 2003. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches.* Sage Publications, Inc.

Debs, Alexandre and Jessica Chen Weiss. 2016. "Circumstances, Domestic Audiences, and Reputational Incentives in International Crisis Bargaining." *Journal of Conflict Resolution.* 60(3): 403-433.

Devereux, Stephen. 2002. "State of Disaster: Causes, Consequences, and Policy Lessons From Malawi." ActionAid.

De Rivera, J. (1968). *The Psychological Dimension of Foreign Policy*. Columbus, OH: Merrill.

Dunning, Thad. 2004. "Conditioning the Effects of Aid: Cold War Politics, Donor Credibility, and Democracy in Africa." *International Organization.* 58(Spring): 409-23.

Editorial Board. "Zambia: Opinion." *Times of Zambia*. October 31, 2002. http://allafrica.com/stories/200210310667.html (accessed August 14, 2017).

Eggenberger, Katrin and Patrick Emmenegger. 2015. "Economic Vulnerability and Political Responses to International Pressure: Liechtenstein, Switzerland and the Struggle for Banking Secrecy." *Swiss Political Review.* 21(4): 491-507.

Elliott, Kimberly and Janeen Madan. 2016. "Can GMOs Deliver for Africa?" Center for Global Development, Washington, DC. www.cgdev.org.

Emmanuel, Nikolas G. 2013. "Democratization in Malawi: Responding to International and Domestic Pressures." *African and Asian Studies.* 12: 415-434.

Encyclopedia.com, "Zambia," http://www.encyclopedia.com/topic/Zambia.aspx (accessed November 1, 2017).

Encyclopedia Britannica, "Malawi," http://www.britannica.com/place/Malawi (accessed November 1, 2017).

Encyclopedia Britannica, "Zambia," http://www.britannica.com/place/Zambia (accessed November 1, 2017).

Entous, Adam. "Bush Blasts Europe Over Food Aid," *Toronto Star*, May 22, 2003.

Euractive.com. “EU GMO Ban Was Illegal, WTO Rules.” http://www.euractiv.com/section/trade-society/news/eu-gmo-ban-was-illegal-wto-rules/ (accessed November 6, 2017).

European Commission. Directorate-General for Trade. 2014. *European Union, Trade in Goods with Malawi.*

European Commission. Directorate-General for Trade. 2014. *European Union, Trade in Goods with Zambia.*

European Commission. “Rules on GMOs in the EU.” http://ec.europa.eu/food/food/biotechnology/index_en.htm (accessed November 11, 2017).

Evans, Peter B., Harold K. Jacobson, and Robert D. Putnam., ed. 1993. “Double-Edged Diplomacy.” Los Angeles, CA: University of California Press.

Evans, Peter B. 1993. “Building an Integrative Approach to International and Domestic Politics: Reflections and Projections.” In *Double-Edged Diplomacy,* eds. Peter B. Evans, Harold K. Jacobson, and Robert D. Putnam. London: University of California Press, 397-430.

FAO, “Special Report: FAO/WFP Crop and Food Supply Assessment Mission to Malawi,” May 29, 2002. http://www.fao.org/docrep/005/y6811e/y6811e00.htm (accessed November 4, 2017).

Farnham, Barbara. 2004. “Impact of the Political Context on Foreign Policy Decision-Making.” *Political Psychology.* 25(3): 441-463.

Farrish, William, “Biotech is Benign,” *The Guardian,* June 4, 2003. http://www.guardian.co.uk/gmdebate/Story/0,2763,969993,00.html (accessed November 1, 2017).

Fas.org. “U.S. Regulation of Genetically Modified Crops.” http://fas.org/biosecurity/education/dualuse-agriculture/2.-agricultural-biotechnology/us-regulation-of-genetically-engineered-crops.html (accessed November 6, 2017).

Fearon, James D. 1994. “Domestic Political Audiences and the Escalation of International Disputes.” *The American Political Science Review.* 88(3): 577-592.

Fikru, Mahelet G. 2016. “Determinants of International Standards in Sub-Saharan Africa: The Role of Institutional Pressure from Different Stakeholders.” *Ecological Economics.* 130: 296-307.

Fig, David. 2003. “The Decision of the Zambian Government to Ban Genetically Modified Food Aid.” World Social Forum, Porto Alegre, Brazil.

Finnemore, Martha and Kathryn Sikkink. 1998. “International Norm Dynamics and Political Change.” *International Organization.* 52(4): 887-917.

Food and Agriculture Organization. “Special Report: FAO/WFP Crop and Food Supply Assessment Mission to Malawi.” http://www.fao.org/docrep/005/y6811e/y6811e00.htm (accessed November 4, 2017).

George, Alexander L. and Andrew Bennett. 2005. *Case Studies and Theory Development in the Social Sciences.* Belfer Center for Science and International Affairs.

Gelineau, Francois. 2013. “Electoral Accountability in the Developing World.” *Electoral Studies.* 32: 418-424.

Gerring, John. 2007. *Case Study Research: Principles and Practices.* Cambridge University Press.

GMeducation.org. “A Brief History of Genetic Modification.” http://www.gmeducation.org/faqs/p149248-a-brief-history-of-genetic-modification.html. (accessed October 27, 2017).

Gostek, Katharine. 2016. “Genetically Modified Organisms: How the United States’ and the European Union’s Regulations Affect the Economy.” *Michigan State International Law Review.* 24.3: 761-800.

Greenpeace. “USAID and GM Food Aid,” https://www.iatp.org/sites/default/files/USAID_and_GM_Food_Aid.htm (accessed November 7, 2017).

Gruere, Guillaume and Debdatta Sengupta. 2009. “GM-Free Private Standards and Their Effects on Biosafety Decision-Making in Developing Countries.” *Food Policy.* 34: 399-406.

Hafner-Burton, Emilie M., D. Alex Hughes, and David G. Victor. 2013. “The Cognitive Revolution and the Political Psychology of Elite Decision-Making.” *Perspectives on Politics.* 368-386.

Harsh, Matthew. 2014. “Nongovernmental Organizations and Genetically Modified Crops in Kenya: Understanding Influence Within a Techno-Civil Society.” *Geoforum.* 53: 172-183.

Hutchful, Eboe. 1996. “The Civil Society Debate in Africa.” *International Journal.* Winter: 54-77.

Isaaa.org. “Pocket K No. 16: Global Status of Commercialized Biotech/GM Crops in 2014.” http://www.isaaa.org/resources/publications/pocketk/16/ (accessed November 6, 2017).

Hawkins, Darren G. 1997. “Domestic Responses to International Pressure: Human Rights in Authoritarian Chile.” *European Journal of International Relations.* 3(4): 403-434.

He, Kai. 2008. “Indonesia’s Foreign Policy After Soeharto: International Pressure, Democratization, and Policy Change.” *International Relations of the Asia-Pacific.* 8: 47-72.

History World, “History of Zambia,” http://www.historyworld.net/wrldhis/PlainTextHistories.asp?historyid=ad27 (accessed November 1, 2017).

Hyden, Goran. 1997. “Civil Society, Social Capital, and Development: Dissection of a Complex Discourse.” *Studies in Comparative International Development.* 32(1): 3-30.

International Monetary Fund Factsheet. “Malawi—The Food Crises, the Strategic Grain Reserve, and the IMF.” July 2002. https://www.imf.org/external/np/exr/facts/malawi.htm (accessed September 6, 2017).

Jepperson, Ronald, Alexander Wendt, and Peter J. Katzenstein. 1996. “Norms, Identity, and Culture in National Security.” *In Culture and National Security*, ed. Peter J. Katzenstein, pp. 33-75.

Jervis, Robert. 1978. “Cooperation Under the Security Dilemma.” *World Politics.* 30(2): 167-214.

Jervis, Robert. 1985. “From Balance to Concert: A Study of International Security Cooperation.” *World Politics.* 38(1): 58-79.

Jervis, Robert. 1988. “Realism, Game Theory, and Cooperation.” *World Politics.* 40(3): 317-49.

Kahler, Miles. 1993. “Bargaining with the IMF: Two-level Strategies and Developing Countries.” In *Double-Edged Diplomacy*, eds. Peter B. Evans, Harold K. Jacobson, and Robert D. Putnam. London: University of

California Press, 363-394.

Katzenstein, Peter J., ed. 1978. *Between Power and Plenty: Foreign Economic Policies of Advanced Industrial States.* Madison, WI: The University of Wisconsin Press.

Katzenstein, Peter J. 1985. *Small States in World Markets*. London: Cornell University Press

Kaunda, Joe. "It Will Be Tragic if Lusaka Rejects GM Maize- Ellyne", *The Post* August 12, 2002, http://allafrica.com/stories/200208120657.html (accessed August 15, 2017).

Keohane, Robert. 1984. *After Hegemony: Cooperation and Discord in the World Political Economy.* Princeton: Princeton University Press.

Kilby, Christopher. 2009. "The Political Economy of Conditionality: An Empirical Analysis of World Bank Loan Disbursements." *Journal of Development Economics*. 89: 51-61.

Kilinc, Ramazan. 2014. "International Pressure, Domestic Politics, and the Dynamics of Religious Freedom: Evidence from Turkey." *Comparative Politics.* 46(2): 127-145.

Knight, Will, "Zambia Bans GM Food Aid," October 30, 2002, *New Scientist*, https://www.newscientist.com/article/dn2990-zambia-bans-gm-food-aid/ (accessed November 7, 2017).

Knoema.com, "World Data Atlas: Zambia: Adult Literacy Rate," https://knoema.com/atlas/Zambia/topics/Education/Literacy/Adult-literacy-rate (accessed November 1, 2017).

Kull, Steven, "American Public Support for Foreign Aid in the Age of Trump," Brookings Institution, https://www.brookings.edu/research/american-public-support-for-foreign-aid-in-the-age-of-trump/ (accessed November 30, 2017).

Kwapata, Kingdom Personal Interview, August 12, 2016, Lilongwe, Malawi.

Lehman, Howard P. and Jennifer L. McCoy. 1992. "The Dynamics of Two-level Bargaining: The 1988 Brazilian Debt Negotiations." *World Politics*. 44(4): 600-644.

Levendusky, Matthew S. and Michael C. Horowitz. 2012. "When Backing Down is the Right Decision: Partisanship, New Information, and Audience Costs."

*The Journal of Politics.* 74(2): 323-338.

Lewanika, Mwananyanda Mbikusita, “After GM Food Aid, What Next?,” *The Post*, August 8, 2002. http://allafrica.com/stories/200208080601.html (accessed August 16, 2017).

Lewis, David. 2002, “Civil Society in African Contexts: Reflection on the Usefulness of a Concept.” *Development and Change.* 33(4): 569-586.

Lieberman, Sarah and Tim Gray. 2008. “GMOs and the Developing World: A Precautionary Interpretation of Biotechnology.” *The British Journal of Politics and International Relations.* 10: 395-411.

Ligomeka, Brian. “Malawi: Genetically Modified Food to Save Starving Africans.” *Malawi Insider*. September 18,2002. http://allafrica.com/stories/200209180420.html (accessed August 15, 2017).

Local Histories, “A Short History of Malawi,” http://www.localhistories.org/malawi.html (accessed November 1, 2017).

Local Histories, “A Short History of Zambia,” http://www.localhistories.org/zambia.html (accessed November 1, 2017).

Low, Morris. 1999. “Science and Civil Society in Japan: Physicists as Public Men and Policymakers.” *Historical Studies in the Physical and Biological Sciences*. 30(1): 193-225.

Mabaya, Edward, Juliana Fulton, Stella Simiyu-Wafukho, and Francis Nang’ayo. 2015. “Factors Influencing Adoption of Genetically Modified Crops in Africa.” *Development Southern Africa.* 32(4): 577-591.

Magu, Stephen M. 2015. “Dilemmas of East African Cooperation: Domestic Audience and Prisoner’s Dilemma Approaches on Regional Integration.” *African Studies.* 74(3): 388-403.

Makumba, Wilkson, Personal Interview, August 16, 2016, Lilongwe, Malawi

Makumbe, John Mw. 1998. “Is There a Civil Society in Africa?” *International Affairs.* 74(2): 305-317.

Malido, Webster, “End GM Maize Debate Before People Start Dying—Moonde,” *The Post,* August 12, 2002. http://allafrica.com/stories/200208120659.html (accessed August 20, 2017).

Malido, Webster, “Africa is Experiencing a Catastrophe,” *The Post,* September

15, 2002. http://allafrica.com/stories/200209161314.html (accessed August 17, 2017).

Martin, Lisa and Kathryn Sikkink. 1993. “U.S. Policy and Human Rights in Argentina and Guatemala, 1973-1980.” In *Double-Edged Diplomacy,* eds. Peter B. Evans, Harold K. Jacobson, and Robert D. Putnam. London: University of California Press, 330-362.

Misser, Francois. 2003. “America, EU and Food Aid to Africa: The Americans Want Zambia Sanctioned for Rejecting US-Supplied GM Food Aid, But the EU is Not Too Interested.” *New African.* March (416): 33.

Mistry, Dinshaw. 2015. “Domestic Politics and Nuclear Negotiations.” *Political Science.* January. 214.

Mkoko, Boniface, Telephone Interview, August 20, 2016, Lilongwe, Malawi.

Mohan, Giles. 2002. “The Disappointment of Civil Society: The Politics of NGO Intervention in Northern Ghana. *Political Geography.* 21: 125-154.

Molutsi, Patrick P. and John D. Holm. 1990. “Developing Democracy When Civil Society is Weak: The Case of Botswana.” *African Affairs.* 89(356): 323-340.

Moonze, Larry, “Zukas Criticizes Levy for Refusing GMOs,” *The Post,* November 4, 2002. http://allafrica.com/stories/200211040050.html (accessed August 16, 2017)

Morris. E. Jane. 2011. “Modern Biotechnology—Potential Contribution and Challenges for Sustainable Food Production in Sub-Saharan Africa.” *Sustainability.* 3: 809-822.

Mumba, Luke. “Zambia: Safety of GMOs.” *The Post*. July 29, 2002. http://allafrica.com/stories/200207290123.html (accessed August 15, 2017).

Munusamy, Ranjeni, “Zambia Rejects Mbeki Maize Offer.” *Sunday Times (London)*. October 6, 2002. http://allafrica.com/stories/200210060093.html (accessed August 15, 2017).

Mupuchi, Speedwell, “MP Asks Government to Act Quickly on Hunger,” *The Post,* September 8, 2002. http://allafrica.com/stories/200209090052.html (accessed August 20, 2017).

Musonda, Doris, Personal Interview, August 31, 2016, Lusaka, Zambia.

Mwale, Madalitso, Personal Interview, August 16, 2016, Lilongwe, Malawi.

Mwale, Pascal Newbourne. 2006. “Societal Deliberation on Genetically Modified Maize in Southern Africa: The Debateness and Publicness of the Zambian National Consultation on Genetically Modified Maize Food Aid in 2002.” *Public Understanding of Science.* 15: 89-102.

Ndhlovu, Duncan, Personal Interview, August 13, 2016, Lilongwe, Malawi.

Njuguna, Osman, “Massive Starvation: Churches Send Out Urgent Appeal,” *African Church Information Servicer,* February 3, 2003. http://allafrica.com/stories/200301310644.html (accessed August 14, 2017).

Nkhono. Tamani Mvula, Personal Interview, August 16, 2016, Lilongwe, Malawi.

Ntupanyama, Yanira, Personal Interview, August 17,2016, Lilongwe, Malawi.

Nyondo, Ephraim, Telephone Interview, August 5, 2016, Lilongwe, Malawi.

Onyebadi, Uche. 2012. “Newspaper Agendas and Public Opinion in the 2007 Kenyan Presidential Election.” *African Journalism Studies.* 33: 36-53.

Olive, Andrea, Vagisha Gunasekara, and Leigh Raymond. 2012. “Normative Beliefs in State Policy Choice.” *Political Research Quarterly.* 65(3): 642-655.

Orvis, Stephen. 2001. “Civil Society in Africa or African Civil Society?” *Journal of Asian and African Studies.* 36(1): 17-38.

Our Africa, “Malawi: History and Politics,” http://www.our-africa.org/malawi/history-politics (accessed November 1, 2017).

Owusu, Kwesi and Francis Ng’ambi. 2002. “Structural Damage: The Causes and Consequences of Malawi’s Food Crisis.” World Development Movement.

Oye, Kenneth A. 1985. “Explaining Cooperation Under Anarchy: Hypotheses and Strategies.” *World Politics.* 38(1): 1-24.

Paarlberg, Robert. 2002. “The real threat to GM crops in poor countries: Consumer and policy resistance to GM foods in rich countries.”, *Food Policy*. 27(3): 247–250.

Paarlberg, Robert. 2009. *Starved for Science: How Biotechnology is Being Kept*

*Out of Africa.* Cambridge: Harvard University Press.

Paarlberg, Robert. 2010. “GMO Foods and Crops: Africa’s Choice.” *New Biotechnology.* 27(5): 609-613.

Paarlberg, Robert. 2014. “A Dubious Success: The NGO Campaign Against GMOs.” *GM Crops and Food.* 5(3): 223-228.

Pahre, Robert and Paul A. Papayoanou. 1997. “Using Game Theory to Link Domestic and International Politics.” *The Journal of Conflict Resolution.* 41(1): 4-11.

Peterson, M.J. 2010. “The EU-U.S. Dispute over Regluation of Genetically Modified Organisms, Plants, Feeds, and Foods: Case Summary.” *International Dimensions of Ethics Education in Science and Engineering.*

Pew Initiative on Food and Biotechnology. 2005. “U.S. vs. EU: An Examination of the Trade Issues Surrounding Genetically Modified Food.” http://www.pewtrusts.org/en/research-and-analysis/reports/2005/12/16/us-vs-eu-an-examination-of-the-trade-issues-surrounding-genetically-modified-food (accessed November 6, 2017).

Phiri, Brighton, “Lusaka Has No Laboratory to Detect GM Products,” *The Post,* April 24, 2002. http://allafrica.com/stories/200204240437.html (accessed August 15, 2017).

Phiri, Brighton. “U.S. Comes Under Attack Over GMOs.” August 13, 2002. *The Post*. http://allafrica.com/stories/200208130100.html (accessed August 15, 2017).

Phiri, Brighton. “U.S. Sheds More Light on GM Maize.” *The Post*. August 14, 2002. http://allafrica.com/stories/200208140074.html (accessed August 15, 2017).

Phiri, Brighton, “Government Allows GM Food Aid for Refugees,” *The Post,* September 9, 2002. http://allafrica.com/stories/200209090178.html (accessed August 16, 2017)

Phiri, Brighton. “Implications of GMFs Scare Government.” *The Post.* September 10, 2002. http://allafrica.com/stories/200209100320.html (accessed August 15, 2017).

Phiri, Brighton. “Government Welcomes EU’s Policy on GMOs.” *The Post*. November 1, 2002. http://allafrica.com/stories/200211010138.html (accessed August 15, 2017).

Phiri, Brighton, "WFC Response to Mwanawasa," *The Post,* November 6, 2002. http://allafrica.com/stories/200211060373.html (accessed August 10, 2017).

Phiri, Brighton and Joe Kaunda. "Don't Allow GM Maize in Absence of Policy-ZNFU." *The Post.* October 16, 2002. http://allafrica.com/stories/200210160640.html (accessed August 17, 2017); See also Staff Reporter.

Phiri, Brighton and Webster Malido. "Govertnment is Undecided Over GM Maize-Kavindele." *The Post.* August 12, 2002. http://allafrica.com/stories/200207260327.html (accessed August 15, 2017).

Poteete, Amy R. 2003. "Ideas, Interests, and Institutions: Challenging the Property Rights Paradigm in Botswana." *Governance: An International Journal of Policy, Administration, and Institutions.* 16(4): 527-557.

Putnam, Robert D. 1988. "Diplomacy and Domestic Politics: The Logic of Two-Level Games." *International Organization.* 42(3): 427-460.

Putnam, Robert D. 1993. *Making Democracy Work: Civic Traditions in Modern Italy.* Princeton, NJ: Princeton University Press.

Rapuro. Ochieng, "Zambia: Cynicism Still Hangs Over Biotechnology Foods." *The Standard (Kenya)*. November 11, 2002. http://allafrica.com/stories/200211120115.html (accessed August 16, 2017)

Saluseki, Bivan, "Zambia: Lusaka Shouldn't be Pushed Into Accepting GMOs." *The Post.* July 31, 2002. http://allafrica.com/stories/200207310099.html (accessed August 18, 2017).

Saluseki, Bivan. "Zambia: Zambia Faces a Disaster if it Continues to Block Food Aid." *The Post*. November 17, 2002. http://allafrica.com/stories/200211190565.html (accessed August 15, 2017).

Scholl, Almuth. 2009. "Aid Effectiveness and Limited Enforceable Conditionality." *Review of Economic Dynamics.* 12: 377-91.

Sebenius, James K. 1992. "Challenging Conventional Explanations of International Cooperation: Negotiation Analysis and the Case of Epistemic Communities." *International Organization* 46(1): 323-65.

Sen, Amartya. 1981. *Poverty and Famines: An Essay on Entitlement and*

*Deprivation.* Oxford: Oxford University Press.

Sheikhha, Mohammad Hasan. 2017. "Genetically Modified Food: Yes or No?" *Journal of Nutrition and Food Security.* 2(1): 81-83.

Sichalwe, Noel. "Zambia: GM Maize can be a Solution to Zambia's Hunger-James Bond." *The Post*. November 10, 2002. http://allafrica.com/stories/200211110551.html (accessed August 15, 2017).

Sichinga, Robert, Personal Interview, August 24, 2016, Lusaka, Zambia

Simon, H. A. (1995). Rationality in political behavior. *Political Psychology. 16*, 45–61.

Simpson, David, "President Draws Fire," *BusinessDay*, January 6, 2003. http://allafrica.com/stories/200301060357.html (accessed August 17, 2017).

Snidal, Duncan. 1985. "The Game Theory of International Politics." *World Politics.* 38(1): 25-57.

Snidal, Duncan. 1985a. "Coordination versus Prisoners' Dilemma: Implications for International Cooperation and Regimes." *The American Political Science Review.* 79(4): 923-42.

Snyder, Glenn H. and Paul Diesing. 1977. *Conflict Among Nations: Bargaining, Decision-Making, and System Structure in International Crises.* Princeton: Princeton University Press.

Staff Reporter. "Zimbabwe: Interview with U.S. Ambassador Joseph Sullivan, *IRIN*, June 27, 2002. http://allafrica.com/stories/200206270332.html (accessed August 15, 2017).

Staff Reporter. "Southern Africa: Focus on GM Food Aid." *IRIN*. July 2, 2002. http://allafrica.com/stories/200207020658.html (accessed August 16, 2017).

Staff Reporter. "Southern Africa: Interview with WFP Regional Director Judith Lewis." *IRIN*. July 3, 2002. http://allafrica.com/stories/200207030690.html (accessed August 16, 2017).

Staff Reporter. "Zambia: WFP Urges Government to Decide Whether to Accept GM Food." *IRIN.* July 3, 2002. http://allafrica.com/stories/200208130608.html (accessed August 15, 2017).

Staff Reporter , WFP Clears Air on GMO Food Issue," *Financial Gazette,* August 14, 2002. http://allafrica.com/stories/200208150482.html (accessed August 15, 2017).

Staff Reporter, Southern Africa: WHO Urges Acceptance of GM Food Aid." *IRIN*. August 28, 2002. http://allafrica.com/stories/200208280566.html (accessed August 15, 2017).

Staff Reporter. "Southern Africa: Powell slams Southern African States Over GM Aid Food." *The Standard.* September 5, 2002. http://allafrica.com/stories/200209050638.html (accessed August 15, 2017).

Staff Reporter, "Milling GM Food Aid Costs Malawi US$20 Million," *The Nation,* September 11, 2002, http://www.afrol.com/News2002/maw014_gm_foodaid.htm (accessed November 11, 2017).

Staff Reporter. "Southern Africa: Divergent Views on Modified Foods Delay Food Aid." *The Daily News (Harare)*. October 1, 2002. http://allafrica.com/stories/200210010545.html (accessed August 16, 2017).

Staff Reporter, "Mwanawasa Cracks Down Over Food Crisis", *IRIN*, October 9, 2002. http://allafrica.com/stories/200210090438.html (accessed August 16, 2017).

Staff Reporter, "SADC Awaits Report on GMOs," *The Herald,* October 14, 2002. http://allafrica.com/stories/200210140088.html (accessed August 15, 2017).

Staff Reporter, "Zambia: We'll Stay Put on GMOs," *Times of Zambia*, November 20, 2002. http://allafrica.com/stories/200211200055.html (accessed August 16, 2017).

Staff Reporter, "Anti-GMO Scientists Accused of Bias as Tempers Flare at Bio-Tech Conference," *Times of Zambia*, November 21, 2002. http://allafrica.com/stories/200211210072.html (accessed August 15, 2017).

Staff Reporter. "Zambia: Genetically Modified Organisms a Health Hazard-Report." *Times of Zambia.* December 6, 2002. http://allafrica.com/stories/200212060258.html (accessed August 14. 2017).

Staff Reporter. "Kenya: Food Relief Refusal Irks U.S. Official." *The Standard.*

December 7, 2002. http://allafrica.com/stories/200212070115.html (accessed August 15, 2017).

Staff Reporter. “Southern Africa: U.S. Hits Out Over African Food Policies.” Agencia de Informacao de Mocambique (Maputo). December 17, 2002. http://allafrica.com/stories/200212210065.html (accessed August 16, 2017).

Staff Reporter. “Are Africans Guinea Pigs in Genetic Research?” *African Church Information Service.* January 27, 2003. http://allafrica.com/stories/200301290746.html (accessed August 4, 2017).

Steinberg, Richard H. 2002. “In the Shadow of Law or Power? Consensus-Based Bargaining and Outcomes in the GATT/WTO.” *International Organization.* 56(2): 339-374.

Stiglitz, Joseph. 2002. *Globalization and Its Discontents.* Penguin Books.

Strand, Per. 2012. “Public Opinion as Leadership Disincentive: Exploring a Governance Dilemma in the AIDS response in Africa.” *Contemporary Politics.* 18(2): 174-185.

The Commonwealth, “Malawi: History,” http://thecommonwealth.org/our-member-countries/malawi/history (accessed November 1, 2017).

The Commonwealth, “Zambia: History,” http://thecommonwealth.org/our-member-countries/zambia/history (accessed November 1, 2017).

The Malawi Project, “History,” http://www.malawiproject.org/about-malawi/history/ (accessed November 1, 2017).

Tingley, Dustin H. 2011. “The Dark Side of the Future: An Experimental Test of Commitment Problems in Bargaining.” *International Studies Quarterly* 55: 521-44.

United States General Accounting Office. Report to the Ranking Minority Member, Subcommittee on African Affairs, Committee on Foreign Relations, U.S. Senate. 2003. *Foreign Assistance: Sustained Efforts Needed to Help Southern Africa Recover from Food Crisis.* GAO 03-644.

Van Evera, Stephen. 1997. *Guide to Methods for Students of Political Science.* Cornell University Press.

Van Rooy, Alison. 1998. *Civil Society and the Aid Industry: The Politics and*

*Promise*. London: Earthscan.

VonDoepp, Peter. 1996. “Political Transition and Civil Society: The Cases of Kenya and Zambia.” *Studies in Comparative International Development.* 31(1): 24-47.

Wagner, Harrison. 1983. “The Theory of Games and the Problem of International Cooperation.” *The American Political Science Review.* 77(2): 330-46.

Watts, Michael. 1991. “Entitlements or Empowerment? Famine and Starvation in Africa.” *Review of African Political Economy.* 51: 9-26.

Watts, Michael. 1991. “Hunger, Famine, and the Space of Vulnerability.” *GeoJournal* 30(2): 117-125.

World Data Atlas, https://knoema.com/atlas/Malawi/Adult-literacy-rate (accessed October 26, 2017).

World Data Atlas, https://knoema.com/atlas/Zambia/Adult-literacy-rate (accessed October 26, 2017).

Yin, Robert K. 2009. *Case Study Research: Design and Methods.* Sage Publications.

Youde, Jeremy. 2009. “Government AIDS Policies and Public Opinion in Africa.” *Politikon.* 36: 219-235.

Zacher, Mark W. 2001. “The Territorial Integrity Norm: International Boundaries and the Use of Force.” *International Organization.* 55(2): 215-250.

Zambia Government, http://www.zambia.gov.zm/ (accessed October 28, 2017)

Zambia Tourism, “The History of Zambia,” http://www.zambiatourism.com/about-zambia/history (accessed November 1, 2017).

Zeng, Ka. 2014. “Domestic Politics and U.S.-China Trade Disputes over Renewable Energy.” *EAI Fellows Program Working Paper Series No. 44.*

Zerbe, Noah. 2004. “Feeding the Famine? American Food Aid and the GMO Debate in Southern Africa.” *Food Policy.* 29: 593-608.